# LAND RECLAMATION COMMISSION

# STATE OF MISSOURI

P.O. BOX 176 JEFFERSON CITY, MISSOURI 65102 573-751-4041

|   | Permit to Engage in Surface Mining  LAND RECLAMATION COMMISSION                          |
|---|--|
|   | ISSUE <b>S TO</b>  |
|   | HARBISON-WALKER REFRACTORIES   |
| []  | ursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements |
| THE RESERVE TO SERVE THE PARTY OF THE PARTY | in the application, a permit is hereby granted to engage in surface mining of            |
|   | clay in the state of Missouri. The extent of the   |
|   | proposed mining operation(s) will be on 239.5 acres, more or less.                       |
|   | The locations of the operation(s) under this permit is/are as follows: Renewal           |

# See Attached List

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

IN WITNESS WHEREOF I have hereunto set my hand this 18th day of October 2004

DIRECTOR OF STAFF
Land Reclamation Commission

Permit No. 0146

Effective Date 10/18/2004

Expiration Date 07/31/2005

# Company Name HARBISON-WALKER REFRACTORIES

# Permit Number 0146 Expiration Date – 07/31/2005

| County     | Section  | Township | Range       | Acres<br>Renewed | Acres<br>New | Total<br>Acres | Site/Stream Name                      | Site<br>Number |
|------------|----------|----------|-------------|------------------|--------------|----------------|---------------------------------------|----------------|
| Callaway   | 29       | 45N      | 10W         | 1 1              | 0            | 1              | Keown*                                | 0196           |
| Montgomery | 03       | 47N      | 05W         | 10               | 0            | 10             | Zimmerman #1*                         | 0861           |
| Warren     | 13       | 46N      | 03W         | 7.5              | 0            | 7.5            | Potthast*                             | 0233           |
| Montgomery | 03, 34   | 47N,48N  | 05W         | 40               | 0            | 40             | Zimmerman Pit #5 & North              | 0230           |
| Callaway   | 07       | 46N      | 09W         | 3                | 0            | 3              | Craghead*                             | 0195           |
| Callaway   | 07       | 46N      | 09W         | 6                | 0            | 6              | Wetherell #1 & #2*                    | 0238           |
| Maries     | 01       | 40N      | 07W         | 1                | 0            | l              | Stockton #1*                          | 0218           |
| Warren     | 06       | 46N      | 02W         | 8                | 0            | 8              | Gerding #8*                           | 0208           |
| Callaway   | 32       | 47N      | 09W         | 8                | 0            | 8              | K.M. Craghead #1A                     | 0197           |
| Lincoln    | USS-1710 | 51N      | 01W         | 24               | 0            | 24             | Tucker                                | 0221           |
| Lincoln    | USS-1710 | 51N      | 01W         | 5                | 0            | 5              | White*                                | 0201           |
| Warren     | 26       | 47N      | 01W         | 3                | 0            | 3              | Martin #3*                            | 0237           |
| Warren     | 08       | 46N      | 02W         | 3                | 0            | 3              | Meyer #8*                             | 0236           |
| Warren     | 08       | 46N      | 03W         | 3                | 0            | 3              | Buxton #3 & #4*                       | 0213           |
| Warren     | 07       | 46N      | 02W         | 4                | 0            | 4              | Hanke #11 & #13*                      | 0206           |
| Warren     | 12       | 46N      | 03 <b>W</b> | 4                | 0            | 4              | August Gerding #8*                    | 0216           |
| Warren     | 33       | 47N      | 03 <b>W</b> | 14               | 0            | 14             | Wildore Realty #3 & #4                | 0228           |
| Gasconade  | 1 04     | 40N      | 06W         | 5                | 0            | 5              | Charles Bunton #1                     | 0212           |
| Warren     | 07       | 47N      | 02W         | 9                | 0            | 9              | Joseph Polston Property               | 0234           |
| Warren     | 09       | 46N      | 02W         | 9                | 0            | 9              | B. Meyer 3 & 4                        | 0214           |
| Montgomery | 08       | 48N      | 05W         | 13               | 0            | 13             | Weant                                 | 0193           |
| Franklin   | 34       | 43N      | 04W         | 15               | 0            | 15             | Sickendick                            | 0231           |
| Warren     | 20       | 46N      | 01W         | 4                | 0            | 4              | Juren Pit 1                           | 0199           |
| Lincoln    | USS-1710 | 51N      | 01W         | 14               | 0            | 14             | Uptegrove Property                    | 0224           |
| Montgomery | 06       | 47N      | 04W         | 5                | 0            | 5              | Chicago-Retort Prop                   | 0191           |
| Gasconade  | 30       | 43N      | 05W         | 10               | 0            | 10             | Farnberg Pit 1A                       | 0194           |
| Maries     | 32       | 40N      | 07W         | 4                | 0            | 4              | Woodruff #1                           | 0189           |
| Osage      | 20, 17   | 44N      | 07W         | 4                | 0            | 4              | A.C. David #1                         | 0192           |
| Gasconade  | 02       | 41N      | 06W         | 3                | 0            | 3              | Hensley #6                            | 0190           |
|            |          |          |             |                  |              |                | *Sites permitted for reclamation only |                |



# MISSOURI DEPARTMENT OF ATURAL RESOURCES

LAND RECLAMATION COMMS

# RECF'YED

# PERMIT RENEWAL FORM FOR INDUSTRIAL MINERAL MINAUG 1 8 2004

P.O. BOX 176 JEFFERSON CITY, MO 65102-0176

| PERMIT RENEWALT OR WITCH   |  |                                 |                                       |                 |             |                          |
|--|--|---------------------------------|---------------------------------------|-----------------|-------------|--------------------------|
| THAT OF CORPORATION, COMPANY, PARTNERSHIP OR INSTITUTION HOLD THE TRANSPORT HOLD THE TRAN |  | RE                              | MISSOURI DAND<br>ECLAMATION COMMIS    | 201910          | 4           |                          |
| ADDRESS  |  | CITY                            |                                       | STAT            |             | ZIP CODE                 |
| 1301 Westminster Avenue  |  | F                               | ulton                                 |                 | MO          | 65251                    |
| CONTACT PERSON   |  |                                 |                                       |                 | PHONE       |                          |
| David Keller   |  |                                 |                                       |                 | .642.       | 8787 x 25                |
| FEES: COMPLETE SECTION FOR   |  |                                 |                                       | 0.00            |             |                          |
| Section I. Fees: Open pit operators and gravel:  | d those mining n   | iore than                       | five thousand (5,                     | 000) tons       | of sanc     | l and/or                 |
| 1. To compute the site fee complete the comp | alumps and lines   | halour                          |                                       |                 |             |                          |
|  | olumns and lines   | below.                          |                                       | For site        | es operate  | ed less than six (6)     |
| SITE NAME OR NUMBER (add a separate sheet for additional sites)  | 1  |                                 | it the site will be                   | months          |             | it year pay \$150.00     |
| ,  | operated dui   | operated during the permit year |                                       |                 | s operate   | d six (6) months or      |
| 1.   | Jan, Feb, Mar, Apr,  | May, Jun, Ju                    | l, Aug, Sep, Oct, Nov, D              | more p          | er permit   | year pay \$300.00        |
| 2.   | 1  | •                               | I, Aug, Sep, Oct, Nov, D              | 1 4             |             |                          |
| 3. <b>, , ),</b>   | Jan, Feb, Mar, Apr,  | May, Jun, Ju                    | l, Aug, Scp, Oct, Nov, D              | 1 .             |             |                          |
| 4.   | Jan, Feb, Mar, Apr,  | May, Jun, Ju                    | l, Aug, Scp, Oct, Nov, D              | Occ \$          |             |                          |
| 5.   |  | •                               | l, Aug, Scp, Oct, Nov, D              | 4               |             |                          |
| 6.   | 1  | -                               | l, Aug, Sep, Oct, Nov, D              |                 |             |                          |
| 7. / 00  | Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec<br>Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec |                                 |                                       |                 |             |                          |
| 8. <b>9</b> .  | 1  | - ·                             |                                       |                 |             |                          |
| Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec  |  | , –                             |                                       |                 |             |                          |
| TOTAL SITE FEE   |  |                                 | ,,,,,                                 | <del></del>     |             |                          |
|  |  |                                 |                                       |                 | 500         |                          |
| 2. Acreage fee: \$5 X 239.5 number of ac   |  |                                 |                                       | S &             | ۶ "۱۰       | 17.5                     |
| 3. Annual permit fee:  |  |                                 |                                       | <u>\$ 50</u>    | 0.00        |                          |
| 4. Total Fee: Add totals from 1, 2, and 3  |  |                                 |                                       | \$ <u>61</u>    | 97.         | 50                       |
| NOTE: If   | Total Fee exceed   | s \$2,500.0                     | 00 then pay only                      | \$ <u>2,500</u> | .00         |                          |
| SECTION II. FEES: Sand and/or grave  | el operators minin   | g less tha                      | n five thousand (5,                   | 000) tons       | per yea     | <del></del> r:           |
| 1. Annual Permit Fee   |  |                                 |                                       | \$ 30           | 0.00        |                          |
| SIGNATURE OF APPLICANT   |  | TITLE                           | · · · · · · · · · · · · · · · · · · · | DATE            |             |                          |
| 11/11/11/11  |  | Gar                             | oy 138                                | 8/0             | 1/04        |                          |
| Appeared before me this 9 day of Que   | , 20 <b>0</b> 5  | 1 0                             | rud Keller.                           |                 | <del></del> | to me personally         |
| known, who executed the above as their free acts   | and deeds.   | AS                              | TOTAL TIETHER.                        |                 |             |                          |
| NOTARY PUBLIC EMBOSSER SEAL STATE  | $\gamma_{0}$   |                                 |                                       | COUNTY (OR C    |             | ,                        |
| SUBSCRIB   | ED AND SWORN BEFORE ME   | , THIS                          |                                       | Au              | drai        | K                        |
|  | gth DAY OF   | Qua                             | 20/0.                                 | RUBBER ST       | AMP CLE     | AR AREA BELOW            |
| NO ARY P   | UBLIC SIGNATURE  | . 0                             | MY COMMISSION EXPIRES                 |                 |             | MARTIN<br>TE OF MISSOURI |
| SINUAL NOTARY P  | UBLIC NAME (TYPEO OR PRIN  |                                 | 10-6.2004                             | MY COMMIS       | SION EX     | PIRES 10/6/2004          |
| 1 1  | a Lee Ma   | tin.                            |                                       | AU              | DRAINC      | OUNTY                    |
| FOR DEPARTMENT USE ONLY: APPROVED BY   | DATE APPROVED  |                                 | PERMIT NUMBER                         | <del></del>     | EXPIRATI    | ON DATE                  |
| R. J. Br   | 9-16   | -04                             | 0146                                  |                 |             | 7-31-05                  |

MISSOURI DEPARTMENT CNATURAL RESOURCES ECENVE JAN 1 2 2010 0. BOX 176 LAND RECLAMATION COMMISSION

MO 780 1036 (17 91)

SITE INFORMATION FORM

JEFFERSON CITY, MO 65102

| SITE NAME OR NUMBER   | RECLAMATION COMMERCION UMBER     |                              |  |  |
|---|----------------------------------|------------------------------|--|--|
| A.C. David #1   | 146                              |                              |  |  |
| COMPANY NAME  |                                  |                              |  |  |
| Harbison-Walker Refractories Compa  | ny                               |                              |  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                      |  |  |
| Osage   | NW 1/4 Sect. 20; SW 1/4 Sect. 17 | 20 & 17                      |  |  |
| TOWNSHIP  | RANGE                            | ACRES                        |  |  |
| 44 N  | 7 W                              | 4                            |  |  |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  |                                  |                              |  |  |
| MINERAL COMMODITY   | ESTIMATED                        | TONS/YEAR (FOR GRAVEL SITES) |  |  |
| Fire Clay   |                                  |                              |  |  |
|   |                                  |                              |  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  |                                  |                              |  |  |
| Mr. Charles Salarano (Section 20)   |                                  |                              |  |  |
| ADDRESS   | -                                |                              |  |  |
| 1281 Branch Street  |                                  |                              |  |  |
| CITY  | STATE                            | ZIP CODE                     |  |  |
| Holts Summit  | мо                               | 65043                        |  |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):  |                                  | DATE OF AGREEMENT            |  |  |
| MINERAL DEED  | LEASE                            |                              |  |  |
| WARRANTY DEED   | VERBAL AGREEMENT                 |                              |  |  |
| OTHER (DESCRIBE):   |                                  |                              |  |  |
|   |                                  |                              |  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)   |                                  |                              |  |  |
| · · · · · · · · · · · · · · · · · · ·   | mv                               |                              |  |  |
|   | шу                               |                              |  |  |
| Harbison-Walker Refractories Compa  |                                  |                              |  |  |
| Harbison-Walker Refractories Compa  |                                  |                              |  |  |
| Harbison-Walker Refractories Compa  | STATE                            | ZIP CODE                     |  |  |
| Harbison-Walker Refractories Compa  | STATE                            | ZIP CODE<br>65251            |  |  |
| Harbison-Walker Refractories Compandents  P.O. Box 430  Entry  Fulton                                 |                                  | 1                            |  |  |
| Harbison-Walker Refractories Company Property Property Property Pulton                                | STATE                            | 65251                        |  |  |
| Harbison-Walker Refractories Companderss P.O. Box 430 CITY Fulton Source of RIGHT TO MINE (CHECK ONE) | Missouri                         | 65251  DATE OF AGREEMENT     |  |  |

Additional Landowner A.C. David Pit #1

(Section 17)



Michael and Theresa McDonald 942 Ranch Bluff Road Villa Ridge, MO 63089

# ... MISSOURI DEPARTMENT OF NATU. RESOURCES LAND RECLAMATION COMMISSION

1477 (12.91)



Page 1

# DERMIT ADDITION FOR INDUSTRIAL MINERAL MINES

| TYPE OF PLAN (CHECK ONL)  |  | MISSOURI LAND   |
|---|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR   |  | RECLAMATION COMMISSION  |
| X LONG TERM, FOR PERIOD THROUGH DATE  | 12/31/2050   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMI  | TING (BY APPLICANT OF PRIOR OPERATOR   | ), INCLUDING SOIL VEGETATION, AND TOPOGRAPHY  |
|   | Larea. This pit has been par   | pical underbrush. Slopes drop sharply to the tially mined prior to 1972 with most of the                                |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1  |  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION (   | COMMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
|   | -12 INCHES   | YES X NO  |
| Prior to topsoil removal and immediately control measures will be installed includi basins in any combination depending on scrapers and/or bulldozers. The topsoil surficial material from all areas to be dist | ng straw bale dikes, silt fenc<br>site specific conditions. Top<br>will be stored near the pit wit | es, rock check dams or sediment osoil will be removed using rubber-tired hin the permitted pit area. We will remove the |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STO   | RAGE AND PROTECTION  |   |
| Surficial material will be stored in gently to control any erosion  | sloping piles and will be see  | ded if necessary with a cover crop  |
|   |  |   |

| B SPOIL       |               |  |
|---------------|---------------|--|
| DESCRIBE METH | ODS AND LOCA  | TION OF SPOIL PLACEMENT AND DISPOSAL   |
| to the        |               |  |
|               |               | DECEIVED   |
|               |               | RECEIVED   |
|               |               | JAN 1 & 2000 <b>D</b>  |
|               |               | MISSOURI LAND RECLAMATION COMMISSION   |
| C ACID M      | ATEDIAL C     | RECLAMATION COMMISSION   |
| C. ACID MA    |               | PMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)  |
|               |               |  |
| None          |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               | <del></del>   | IVE ALL DIMENSIONS IN FEET)  |
| DESCRIBE LOCA | TION AND ORIE | NTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
|               |               |  |
| (See s        | site maps)    |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
|               |               |  |
| VEC           | NO            |  |
| YES           | NO            |  |
|               | X             | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |
|               |               |  |
|               | X             | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and  |
| (             | £             | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may  |
|               |               | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet   |
|               |               | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
| l1            |               |  |
|               | X             | Will any excavation start at or within fifty feet (50') of any property line?  (NOTE: If the answer is "yes", a safety barrier may be needed.)                     |
|               |               | (1.12.1.2.1.2.1.2.1.2.1.1.1.1.1.1.1.1.1.   |

Page 2

MO /80-1327 (17-91)

# RECLAMATION PLAN - 10 CSR 40-10.02-(2)(D)2.

# A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIS #1

PURPOSE **OR LAND USE** 

B SEEDING OR PLANT TIME

Mixture #1

Development

Fall or Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast Re-seeding will be done as needed to achieve a suitable stand.

RECEIVED

MISSOURI LAND
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES   | POUNDS/ACRE        | TREE OR SHRUB SPECI | E STEMS/ACRE               |
|---|--------------------|---------------------|----------------------------|
| Tall Fescue<br>Red Clover<br>Lespediza<br>Wheat or Oats | 25<br>5<br>5<br>30 |                     |                            |
| VEGETATION MIX #2                                       | PURPOSI            | E OR LAND USE       | B SEEDING OR PLANTING TIME |
| Mixture #2  | Developr           | nent                | Spring or Fall             |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES   | POUNDS/ACRE | TREE OR SHRUB SPECIE | STEMS/ACRE |
|---|-------------|----------------------|------------|
| Orchard Grass<br>Timothy  | 10<br>10    |                      |            |
| Korean Lespedeza<br>Wheat or Oats<br>Serecea Lespedeza<br>(On Slopes) | 30<br>20    |                      |            |

TTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. An impoundment will be left by the final phase of mining The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion In no case will the reclaimed topography exceed a 3:1 slope.

RECLAMATION CONVINSSION

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance whith MO 10CSR-40.10.050 (A)(10)(A).

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"  |                  |
|---|------------------|
| D use of LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                | . 0              |
| Agricultural (pasture, cropland, and horticultural)                                       | 3                |
| Development (residential, industrial, and recreational)                                   | 0                |
| Water impoundments (for wildlife, agricultural, or development)                           | 1                |

Page 4



By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  |                                 | TITLE              |                               |
|---|---------------------------------|--------------------|-------------------------------|
| Want 1 gh                               |                                 | Mine Suporvisor    | 2                             |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE                           | •                  | COUNTY (OR CITY OF ST. LOUIS) |
|   | Misseuri                        |                    | Callewry                      |
|   | SUBSCRIBED AND SWORN BEFORE MI  | E, THIS            | USE RUBBER STAMP IN           |
|   | 11 DAY OF Januar                |                    | CLEAR AREA BELOW              |
|   | NOTARY PUBLIC SIGNATURE         |                    | VAREN S. LUTHER               |
|   | Land 1 - Proper                 | , EXPIRES          | NOTARY PUBLIC                 |
|   | Kaun & Luther                   | 7-18-03 S          | ATE OF MISSOURJ               |
|   | NOTARY PUBLIC NAME (TYPED OR PR | INTED) C           | LLAWAY COUNTY                 |
|   | Karen 5 Luther                  | MY COM             | MISSION EXPIRES JULY 18, 1    |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPR                       | OVED PERMIT NUMBER |                               |
|   |                                 |                    |                               |



JAN 12 2000

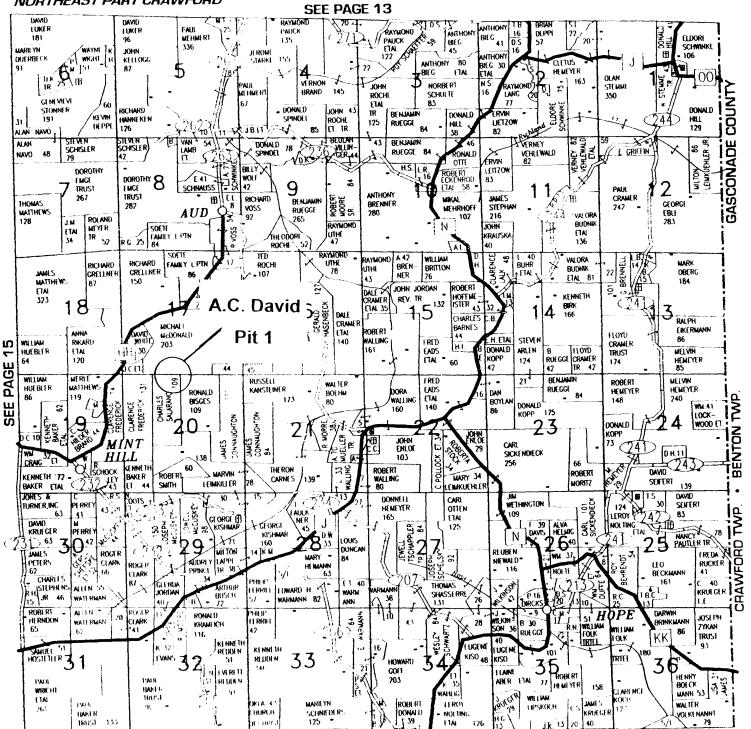
# MELVIN WOLFE, Agent

201 East Main Linn, MO. 65051 Ph. 573-897-2190

MISSOURI LAND We'll always be there for you.

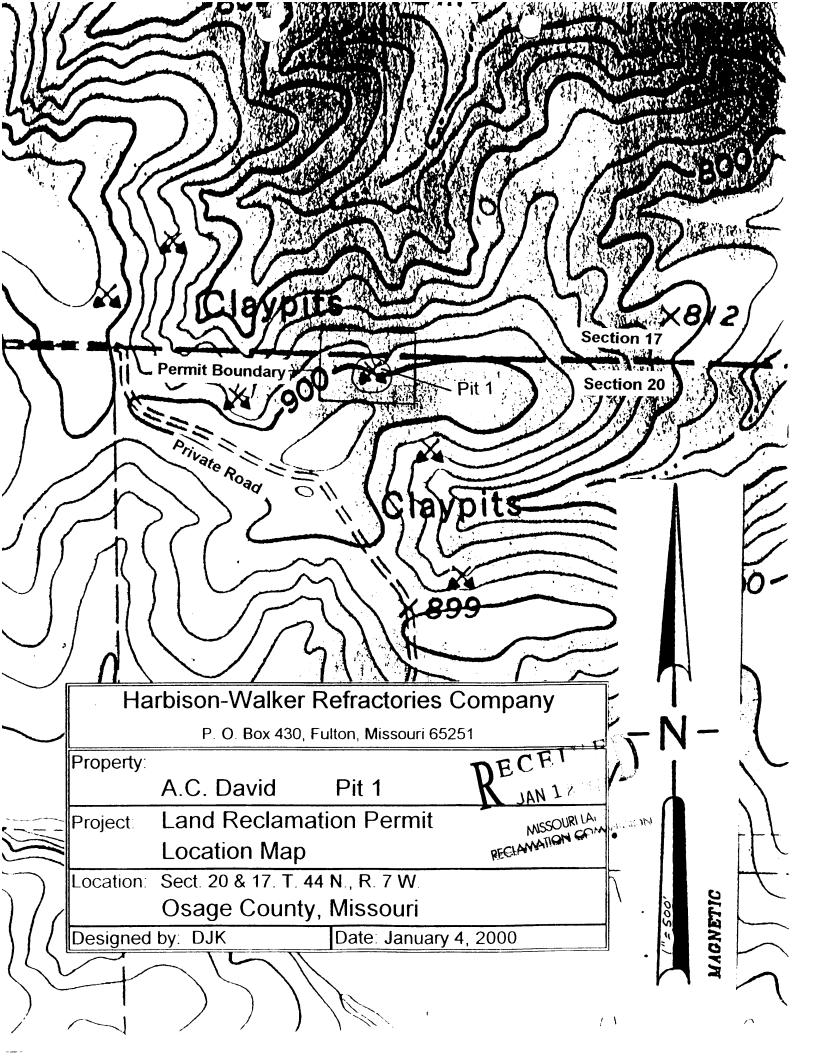
Shelter Insurance Cos., Home Office: 1817 W. Broadway, Columbia, MO 65218

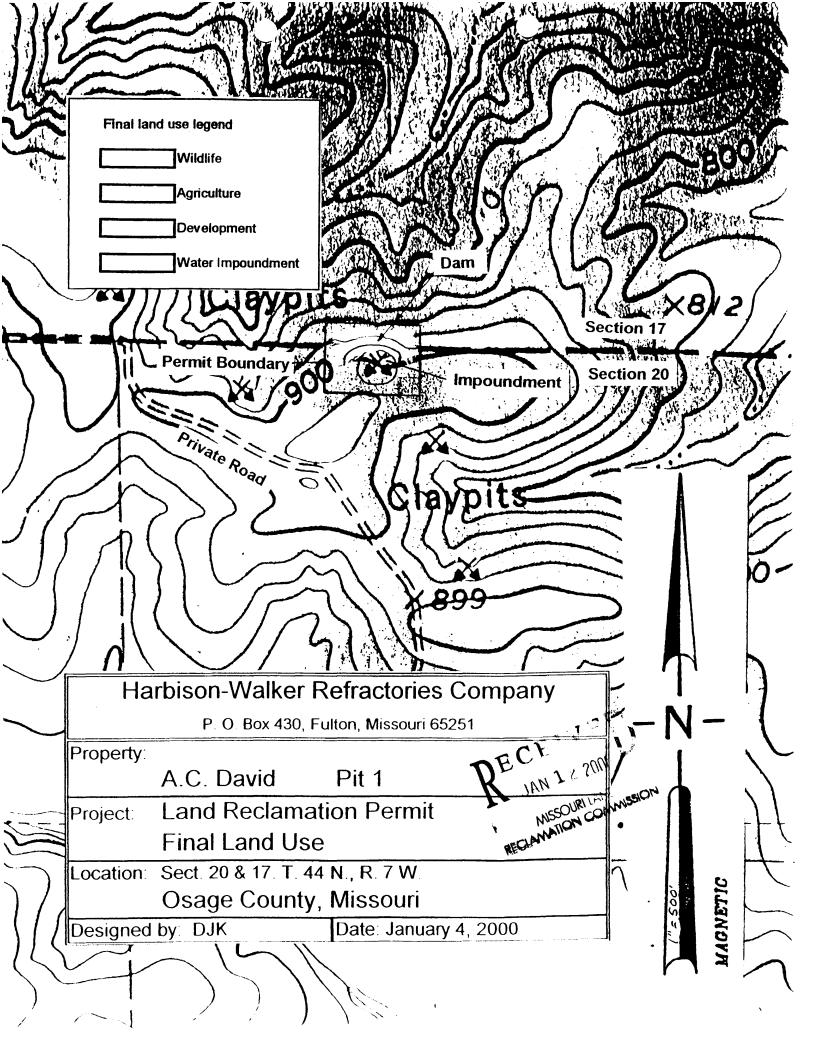
SOUTHEAST PART BENTON NORTHEAST PART CRAWFORD **TOWNSHIP 44N - RANGE 7W** 



**SEE PAGE 22** 

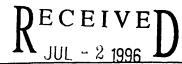
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MO 780-1036 (12-91)



| •   | rea of disturbance assoc | ciated with mining operat |                                       | MISSOURI LAND       |
|---|--------------------------|---------------------------|---------------------------------------|---------------------|
| ITE NAME OR NUMBER                        |                          | PERMIT NUMBER             | REC                                   | CLAMATION COMMISSIO |
| AUGUST GERDING 8                          |                          |                           | 0146                                  |                     |
| OMPANY NAME                               |                          |                           |                                       |                     |
| Harbison-Walker Refractor                 | ries Company             |                           |                                       |                     |
| COUNTY                                    | 1/4 SECTION              |                           | SECTION                               |                     |
| Warren                                    | NE                       |                           | 12                                    |                     |
| TOWNSHIP                                  | RANGE                    |                           | ACRES                                 |                     |
|   | 3 West                   |                           | 4.0                                   |                     |
| 46<br>RIVER OR STREAM NAME (FOR IN-STREAM |                          |                           | 1 4.0                                 |                     |
|   | •                        |                           |                                       |                     |
| MINERAL COMMODITY                         | ·                        | ESTIMATED TONS/YEA        | D (FOR CRAVE)                         | CITEC               |
| NINERAL COMMODITY                         |                          | ESTIMATED TONS/TEA        | IN (FUN GRAVEL                        | 31123)              |
| Fire Clay                                 |                          |                           | · · · · · · · · · · · · · · · · · · · |                     |
|   |                          | ·                         |                                       |                     |
| NAME OF LANDOWNER (ATTACH LIST IF M       | ORE THAN ONE)            |                           |                                       |                     |
| WILLIAM TURNER                            |                          |                           |                                       |                     |
| ADDRESS                                   |                          |                           |                                       |                     |
|   |                          |                           |                                       |                     |
| Route 3                                   |                          | 10-10-                    |                                       | T-12 0005           |
| CITY                                      |                          | STATE                     |                                       | 2IP CODE<br>63382   |
| Warrenton                                 |                          | МО                        |                                       | 03302               |
| SOURCE OF RIGHT TO MINE (CHECK ONE)       | :                        |                           |                                       | DATE OF AGREEMENT   |
| MINERAL DEED                              |                          | LEASE                     |                                       |                     |
| WARRANTY DEED                             |                          | VERBAL AGREEME            | NT                                    |                     |
| OTHER (DESCRIBE):                         |                          |                           |                                       |                     |
|   |                          |                           |                                       |                     |
|   | ·                        |                           |                                       |                     |
| MINERAL RIGHTS OWNER (ATTACH LIST II      | ALODE TUAN ONE           | <del></del> -             |                                       |                     |
|   |                          |                           |                                       |                     |
| Harbison-Walker Refracto                  | ries Company             |                           |                                       |                     |
| ADDRESS                                   |                          |                           |                                       |                     |
| P.O. Box 430,                             |                          |                           |                                       |                     |
| CITY                                      |                          | STATE                     |                                       | ZIP CODE            |
| Fulton                                    |                          | Missouri                  |                                       | 65251               |
|   | ):                       |                           |                                       | DATE OF AGREEMENT   |
| SOURCE OF RIGHT TO MINE (CHECK ONE        |                          |                           |                                       | 1                   |
| SOURCE OF RIGHT TO MINE (CHECK ONE        |                          | LEASE                     |                                       | May 2, 1911         |
|   |                          | LEASE  VERBAL AGREEME     | ,<br>:NT                              | May 2, 1911         |



P.O. BOX 176 JEFFERSON CITY, MO 65102

| Canal Control of the |               |                                |
|---|---------------|--------------------------------|
| TYPE OF PLAN (CHECK ONE):   |               |                                |
| SHORT TERM, FOR ONE PERMIT YEAR   |               |                                |
| LONG TERM, FOR PERIOD THROUGH DATE: AUGUST 06, \$006  | August        | Gerding ?                      |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR AND TOPOGRAPHY.  | PRIOR OPERATO | R), INCLUDING SOIL, VEGETATION |
| This site is currently a pasture area with gently rolling topog   | raphy.        |                                |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |               |                                |
| A. TOPSOIL  |               |                                |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING   | IS TOPSOIL TO | SE SOLD OR DISCARDED OFFSITE?  |
| 12 · INCHES   | YES OR        | NO                             |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   | <del></del>   |                                |
| Topsoil will be removed using rubber-tired scrapers an will be stored near the pit within the permit area. We of topsoil from all areas to be disturbed before minim  | le will rem   | ove 12 inches                  |
|   | _             |                                |
|   |               |                                |
|   |               |                                |
|   |               |                                |
|   |               |                                |
|   |               |                                |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION  |               |                                |
| Topsoil will be stored in gently sloping piles and wil grasses, if necessary, to control erosion.   | l be seede    | d with annual                  |

|         |         | . 0   |
|---------|---------|---|
| B. SPO  |         |   |
| DESCRIB | EMETHOD | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| The     | soil v  | will be moved using bulldozers and rubber-tired scrapers and used a dam to the northeast of the pit.  |
|         |         |   |
|         |         |   |
|         |         |   |
|         |         |   |
|         | D MATER |   |
|         |         | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| I       | None    |   |
|         |         |   |
|         |         |   |
|         |         |   |
|         |         |   |
|         |         |   |
| PIT     | INFORM  | ATION (GIVE ALL DIMENSIONS IN FEET)   |
|         |         | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
|         |         |   |
| Pit     | #8 is   | located in the center of the permit area and is roughly   |
| Cir     | cular 1 | n plain view with an approximate diameter of 150 feet.  |
|         |         |   |
|         |         |   |
|         |         |   |
|         |         |   |
|         |         |   |
| YES     | NO.     |   |
| l       | МО      | tons  |
|         | □<br>□  | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|         | Ŋ       | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of an public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees ma start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|         | X       | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

| F | RE | CL | AMA | MOIT | I PLAN | 1 - 10 | CSR | 40-10.0 | 20(2)(D)2. |
|---|----|----|-----|------|--------|--------|-----|---------|------------|
|   |    |    |     |      |        |        |     |         |            |
|   |    |    |     |      |        |        |     |         |            |
|   |    |    |     |      |        |        |     |         |            |

A. REVEGETATION (Attach additional sheets, if needed)

Mixture #1

PURPOSE OR LAND USE
Agricultural

Agricultural

B. SEEDING OR PLANTING TIME
Fall or Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES    | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE  |
|-------------------|---------------------|-----------------------|-------------|
| Tall Fescue       | 25                  |                       |             |
| Red Clover        | 5                   |                       |             |
| Wheat or oats     | 30                  |                       |             |
|                   |                     |                       |             |
|                   |                     |                       |             |
|                   |                     |                       |             |
|                   |                     |                       |             |
|                   | 1                   |                       |             |
|                   |                     |                       | <u></u>     |
| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | INTING TIME |
| Mixture #2        | Agricultural        | Fall or s             | pring       |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring of fall after finish grading the seed mix will be drilled in with a no-till drill. Re-seeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                     | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|------------------------------------|-------------|-----------------------|------------|
| rchard Grass                       | 10          |                       |            |
| Korean Lespedeza                   | 6           | •                     |            |
| Theat or Oats                      | 30          |                       |            |
| ise serecea Lespedeza<br>on slopes | 20          |                       |            |
|                                    |             |                       |            |
|                                    |             | •                     |            |
|                                    |             |                       |            |

| B. | G | R | A | D | ı | N | G |
|----|---|---|---|---|---|---|---|

| DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING |  |
|---|--|
|   |  |

Pit #8 will be reclaimed by contructing a dam to the north of the pit. This will create an impoundment of approximately 2 acres with traversable slopes.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### GRADING

Grading will be done as mining advances and as spoil is either backfilled or put into a dam. Final grading of all disturbed areas will be completed within one year after mining.

# REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

# AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

| 12 inches   |                  |
|---|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                |                  |
| Agricultural (pasture, cropland, and horticultural)                                       | 2                |
| Development (residential, industrial, and recreational)                                   |                  |
| er impoundments (for wildlife, agricultural, or development)                              | 2                |

By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent Intend(s) to mine in accordance with this Mihe Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

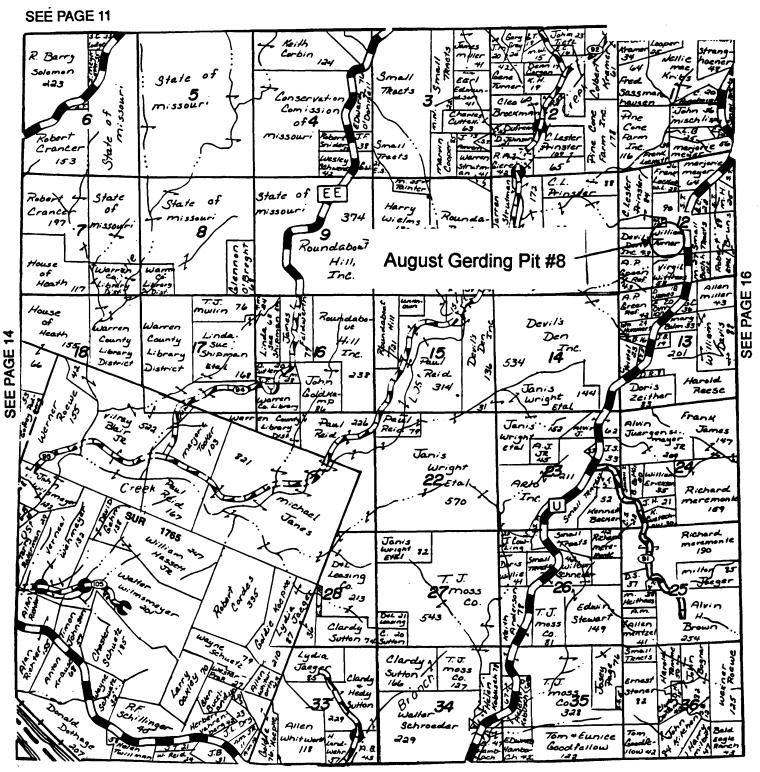
| SIGNATURE OF APPLICANT       | 1                                     | TITLE                               |                        | DATE  |
|------------------------------|---------------------------------------|-------------------------------------|------------------------|---|
| WKB                          | round                                 | Vice-Par                            | indut                  | June 28, 1996   |
| NOTARY PUBLIC EMBOSSER SEAL  | STATE PANASY/VONIO                    | ~                                   | COUNTY (OR CIT         | DA CAY  |
|                              | SUBSCRIBED AND SWORN BEFORE ME. TH    | 15<br>12 1996                       | USE RUBBEI             | STAMP IN CLEAR AREA BELOW   |
|                              | NOTARY PUBLIC SIGNATURE FUCL          | MY COMMISSION<br>EXPIRES<br>1/29/97 | Kathle<br>Pitts        | Notarial Seal<br>en S. Fuchs, Notary Public<br>burgh, Allegheny County<br>nission Expires Nov. 29, 1997 |
|                              | NOTARY PUBLIC NAME (TYPED OR PRINTED) | FUCHS                               | My Comr<br>Member, Pen | mission Expires Nev. 29, 1997<br>Insylvania Association of Notaries                                     |
| APPROVED BY (DIRECTOR'S REPR | RESENTATIVE)                          | DATE APPROVED                       |                        | PERMIT NUMBER   |
| Moholy                       | Stuli                                 | 9-13-96                             |                        | 0/46  |

MO 780-1327 (12-91)

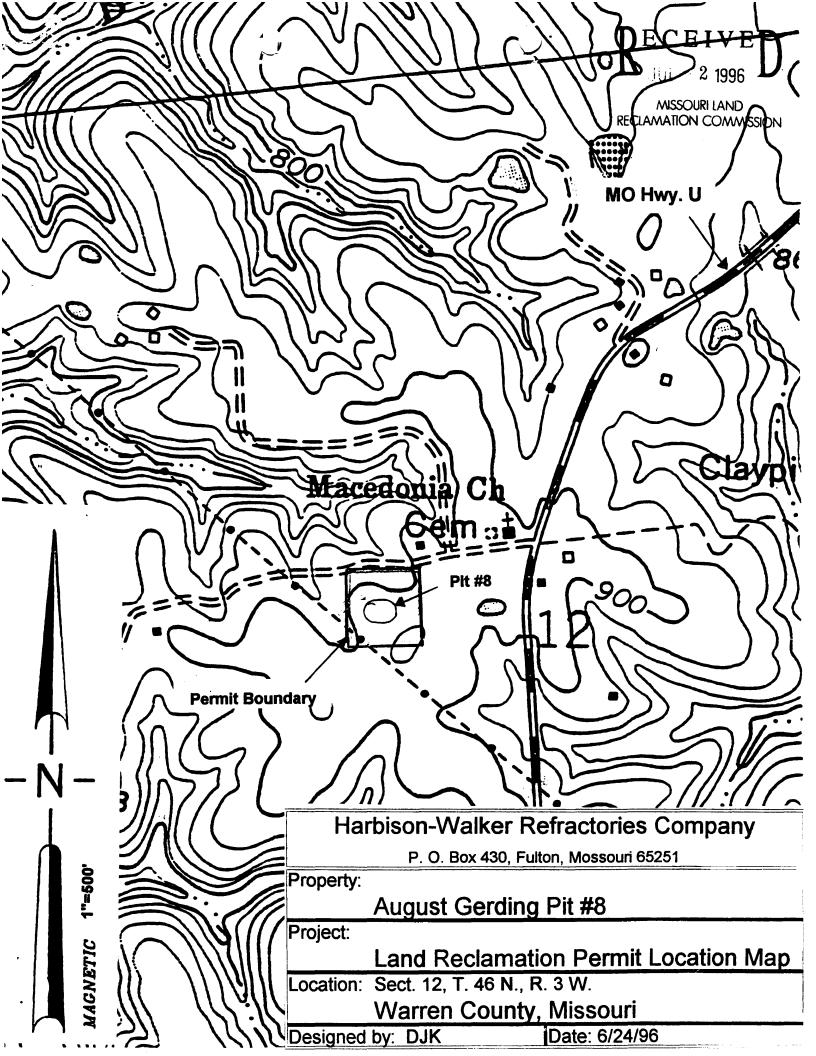
PAGE 5 OF 5

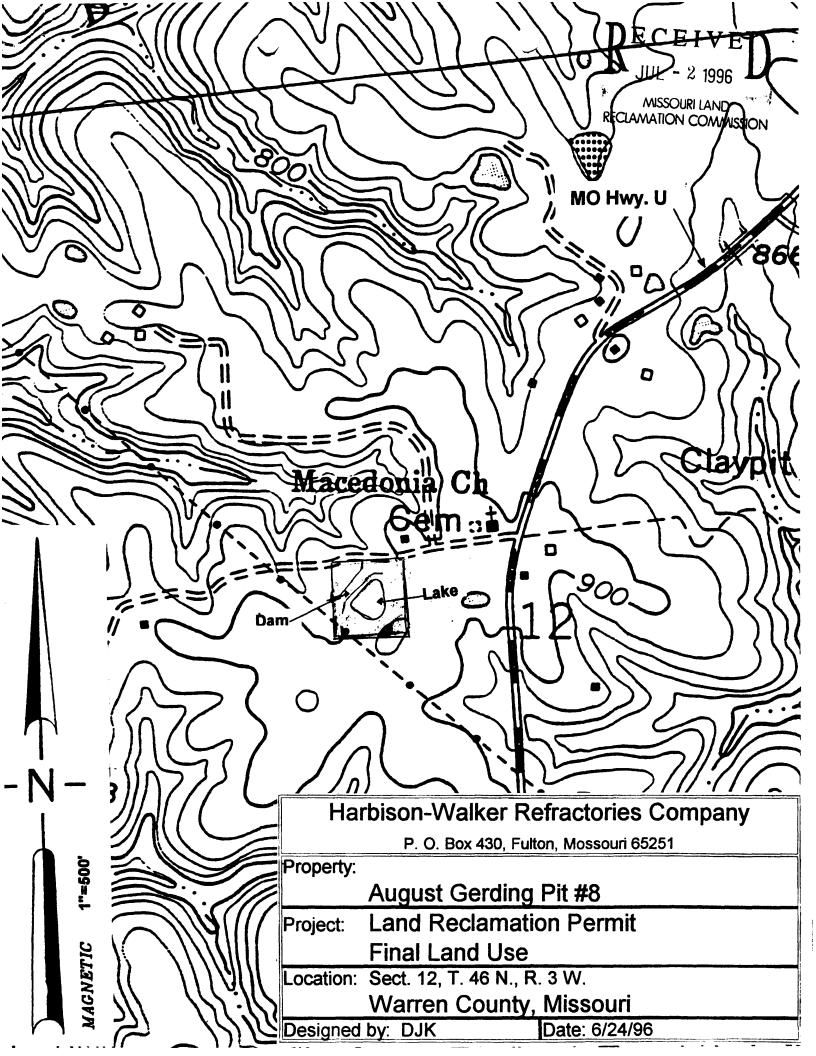
# Township 46 RECENTE Bange 3W

MISSOURI LAND RECLAMATION COMMISSION



**SEE PAGE 18** 





# MISSOURI DEPARTMENT F NATURAL RESOURCES PECEIVE LAND RECLAMATION COMMISSION

MO 780-1036 (12-91)

JEFFERSON CITY, MO 65102 SITE INFORMATION FORM

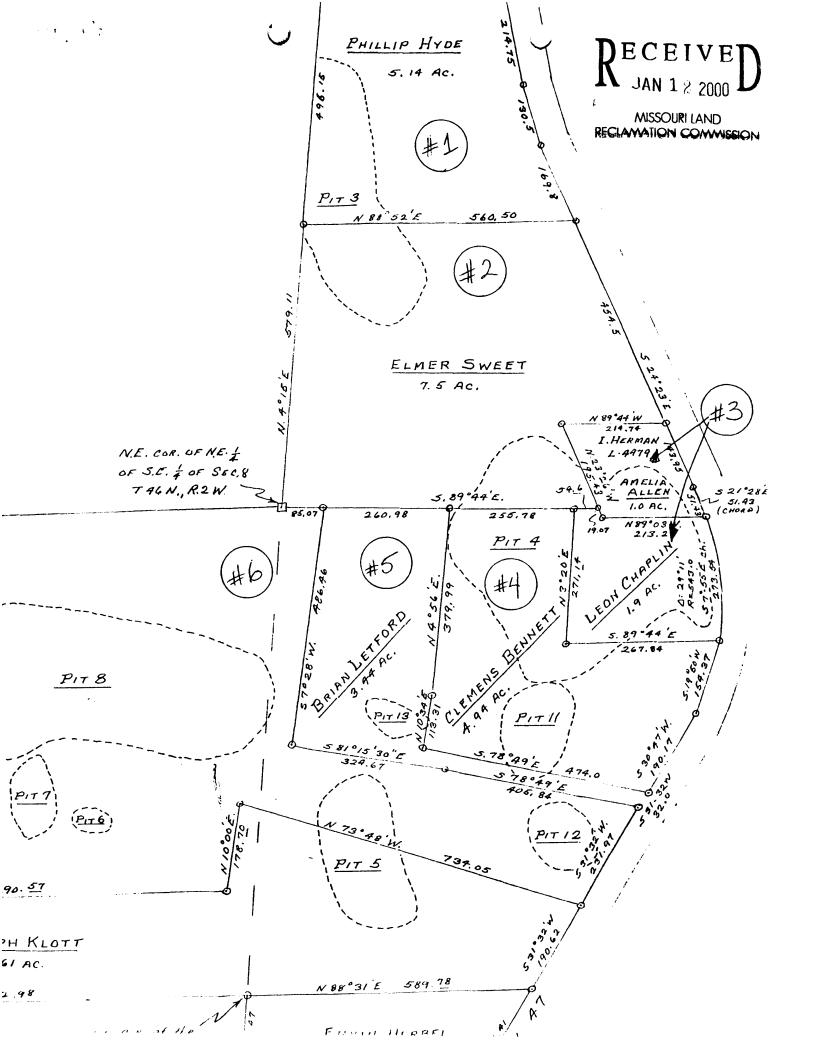
| SITE NAME OR NUMBER EX DUN SIGN to EXIS                           | ring site reclamation co          | PWEIRING SWIMBER                       |
|---|-----------------------------------|--|
| B. Meyer 3 and 4 Expansion to exist                               |                                   | 146                                    |
| COMPANY NAME  |                                   |  |
| Harbison-Walker Refractories Company                              |                                   |  |
| COUNTY  | 1/4 SECTION                       | SECTION                                |
| Warren  | NW 1/4                            | 9                                      |
| TOWNSHIP  | RANGE                             | ACRES                                  |
| 46 North  | 2 West                            | 9                                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                   |  |
| MINERAL COMMODITY   |                                   | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                   |  |
|   |                                   |  |
|   |                                   |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                   |  |
| See Attachment  |                                   |  |
| ADDRESS   |                                   |  |
|   |                                   |  |
| CITY  | STATE                             | ZIP CODE                               |
|   |                                   |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                   | DATE OF AGREEMENT                      |
| MINERAL DEED  | LEASE                             |  |
| WARRANTY DEED   | VERBAL AGREEME                    | ENT                                    |
| OTHER (DESCRIBE):   |                                   |  |
|   |                                   |  |
|   |                                   |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                   |  |
| Harbison-Walker Refractories Company                              |                                   |  |
| ADDRESS   |                                   |  |
| P.O. Box 430  |                                   |  |
| CITY  | STATE                             | ZIP CODE                               |
| Fulton  | Missouri                          | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                   | DATE OF AGREEMENT                      |
|   |                                   |  |
| MINERAL DEED  | LEASE                             |  |
| WARRANTY DEED   | VERBAL AGREEME                    | ENT                                    |
| OTHER (DESCRIBE):   |                                   |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plan. |  |

# RECEIVED MISSOURI LAND REGIAMATION COMMISSION

# **Additional Landowners**

# Parcel #

- Brenda L Reyes
   1119 Carrington Dr.
   St. Peters, MO 63376
- 2. Richard Willis III Rt. 1, Box 249A Warrenton, MO 63383
- 3. Harry Harper P.O. Box 549 Warrenton, MO 63383
- 4. Clemence and Jane Bennett Route 1, Box 259B Warrenton, MO 63383
- 5. Brian G. Letford 3 Shadow Lane St. Peters, MO 63376
- 6. Pamela McRoy Route 1, Box 260 Warrenton, MO 63383



# MISSOURI DEPARTMENT OF NATUL RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



| TYPE OF PLAN (CHECK ONE)   |  | RECLAMATION COMMISSION                      |
|--|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |  |   |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | 12/31/2050   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | G (BY APPLICANT OR PRIOR OPERATOR), INCLUDING S                          | SOIL, VEGETATION, AND TOPOGRAPHY            |
| The site is currently in brush and timber and topography is gently slopeing to the west. T   | _  | occurrs in a shallow draw where the         |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |  |   |
| 01 E((((((((((((((((((((((((((((((((((((   |  |   |
| AVERAGE DEPTH OF TOPSOIL. PRIOR TO LAND RECLAMATION COM.   | MISSION PERMITTING   | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 12   | INCHES   | YES X NO                                    |
| Topsoil will be removed using rubber-tired s near the pit within the permit area. We will disturbed before mining or stripping begins. | scrapers and bulldozers. The tops<br>remove the 12 inches of surficial r |   |
|  |  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE  | SE AND PROTECTION  |   |
| Surficial material will be stored in gently slo to control any erosion.  | ping piles and will be seeded with                                       | annual grasses, if necessary,               |
|  |  |   |

| DESCRIBE METHO      | DS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |   |
|---------------------|--|---|
| •                   | vill be removed using bull-dozers and rubber tired scrapers. Spoil will be backfilled in low<br>west of the pits   | v areas or in a dam                     |
|                     | AAIG   | CEIVED N 1 2 2000 SOURI LAND ION COMMON |
| C. ACID MA          | TERIALS  |   |
| DESCRIBE METHO      | DS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |   |
| None                |  |   |
| PIT INFORM          | ATION (GIVE ALL DIMENSIONS IN FEET)  |   |
|                     | ON AND ORIENTATION OF PIT. IF NOT CLEAR ON SITE MAPS   |   |
| see site            | e maps   |   |
| YES                 | NO   |   |
|                     | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |   |
|                     | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of value public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty start near the right of way, and in no case may the excavation be closer to the right of way that or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, while greater, unless a variance is granted by the Commission.) | degrees may<br>an fifty feet            |
| X                   | Will any excavation start at or within fifty feet (50') of any property line?  |   |
|                     | (NOTE. If the answer is "yes", a safety barrier may be needed.)  |   |
| MO 780-1327 (12-91) |  | Page 2                                  |

B. SPOIL

# A. REVEGETATION (Attach additional sheets, if needed) REVEGETATION MIX #1 PURPOSE OR LAND USE Mixture #1 Development B SEEDING OR PLANT TIME Fall or Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

ECEIVEN

MISSOURI LAND RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE                              |
|--|---------------------|-----------------------|---|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30       |                       |   |
| VEGETATION MIX #2 Mixture #2               | PURPOSE<br>Developn |                       | SEEDING OR PLANTING TIME Spring or Fall |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass<br>Korean Lespedeza<br>Wheat or Oats<br>Serecea Lespedeza<br>(On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

# B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Two small impoundments will be left by the final phase of mining. The impoundments will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

RECEIVE LAND REGIONATION COMMERCE

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

**GRADING** 

Grading will be done as mining advances. The spoil will either be backfilled in natural low areas to the south, in previously mined areas or into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

#### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12  |                  |
|---|------------------|
| D USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                | 0                |
| Agricultural (pasture, cropland, and horticultural)                                       | 0                |
| Development (residential, industrial, and recreational)                                   | 7                |
| Water impoundments (for wildlife, agricultural, or development)                           | 2                |



By my signature, I attest to the following:

MISSOURI LAND
RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form. and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

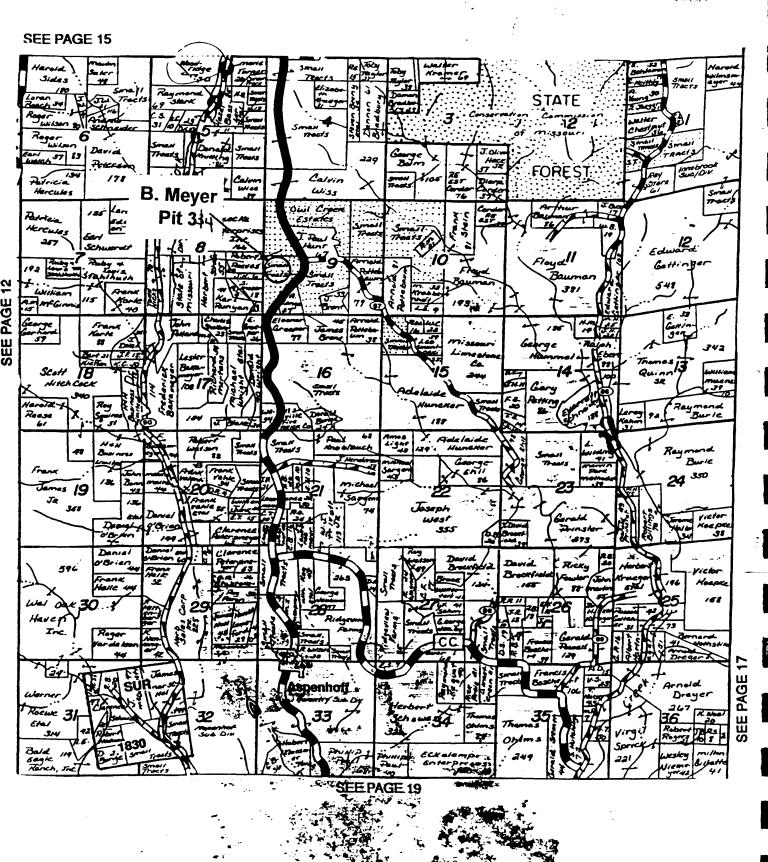
| SIGNATURE OF APPLICANT                  | TITLE   | ne superi) x   | _                                       |
|---|---|----------------|---|
| NOTARY PUBLIC EMBOSSER SEAL             | Musozeni Musozeni                                   |                | COUNTY (OR CITY OF ST. LOUIS)           |
|   | SUBSCRIBED AND SWORN BEFORE ME, THIS                | 20 00          | USE RUBBER STAMP IN<br>CLEAR AREA BELOW |
|   | NOTARY PUBLIC SIGNATURE Laun S Luther               | INT COMMISSION | ACY PUBLIC<br>OF MISSOURI               |
|   | NOTARY PUBLIC NAME (TYPED OR PRINTED)  KRY 5 Luther |                | WAY COUNTY ON EXPIRES JULY 18, 2003     |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED                                       | PERMIT NUMBER  |   |

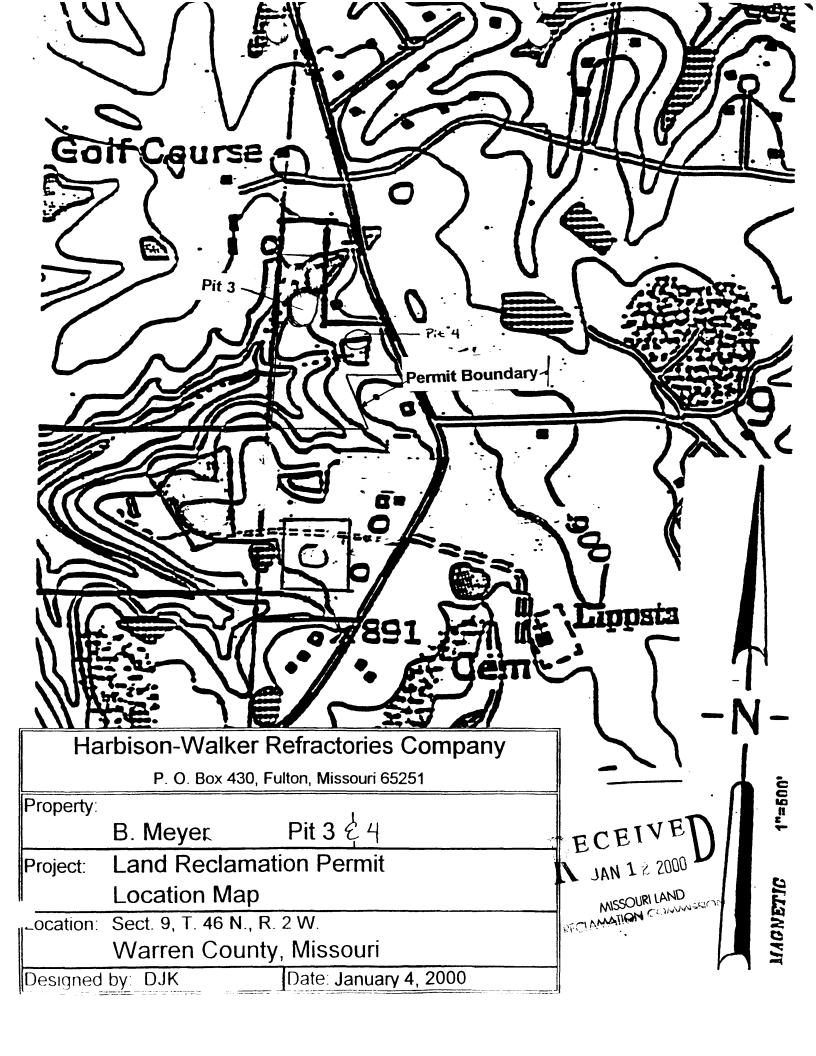
# Township 46 Range 2W

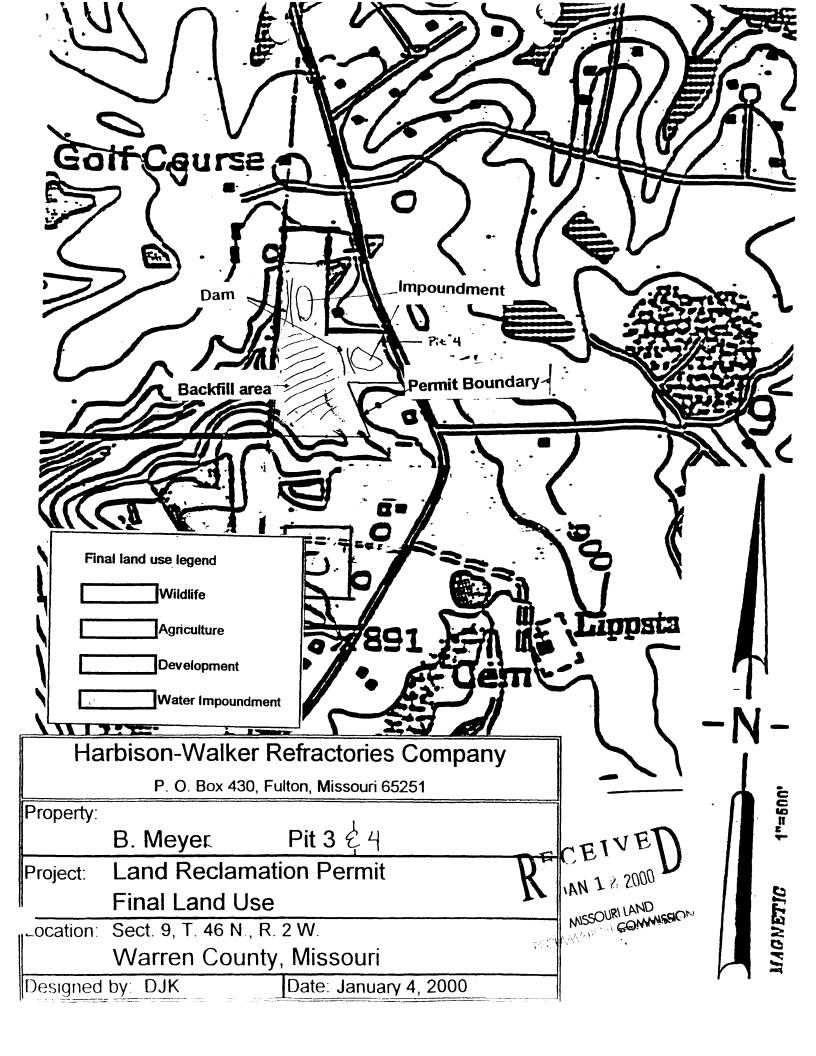


MISSOURI LAND REGIAMATION COMMISSION

😘 © 1989 Mull Map Service







MO 780-1036 (12-91)

| To be completed for each separate   | area of disturbance assoc | iated with mining operatior | ns.               |
|-------------------------------------|---------------------------|-----------------------------|-------------------|
| SITE NAME OR NUMBER                 |                           | PERMIT NUMBER               |                   |
| BUXTON #3, #4                       |                           | 146                         |                   |
| COMPANY NAME                        |                           |                             |                   |
| Harbison-Walker Ref                 | ractories, a divisi       | ion of INDRESCO Inc.        | ,                 |
| COUNTY                              | 1/4 SECTION               |                             | SECTION           |
| Warren                              | Northeast (               | (uarter                     | 8                 |
| TOWNSHIP                            | RANGE                     |                             | ACRES             |
| T 46 N                              | R 3 W                     |                             | 5                 |
| RIVER OR STREAM NAME (FOR IN-STREAM | ACRES)                    |                             |                   |
| WINES W. COLUNDSITY                 |                           | LEGIULIER TONICHER          | 500 00 005 0050   |
| MINERAL COMMODITY                   |                           | ESTIMATED TONS/YEAR (       | FOR GRAVEL SITES) |
| Clay                                |                           |                             |                   |
|                                     |                           |                             |                   |
| NAME OF LANDOWNER (ATTACH LIST IF M | ORE THAN ONE)             |                             |                   |
| ·                                   | ,                         |                             |                   |
| State of Missouri                   | & Susan M. Troxel,        | Resource Forester           |                   |
| ADDRESS                             |                           |                             |                   |
| PO Box 157                          |                           |                             |                   |
| CITY                                |                           | STATE                       | ZIP CODE          |
| Warrenton                           |                           | Missouri                    | 63383             |
| SOURCE OF RIGHT TO MINE (CHECK ONE  | :                         |                             | DATE OF AGREEMENT |
| MINERAL DEED                        |                           | X LEASE                     | September 6, 1961 |
| WARRANTY DEED                       |                           | VERBAL AGREEMENT            |                   |
| OTHER (DESCRIBE):                   |                           |                             |                   |
|                                     |                           |                             |                   |
|                                     |                           |                             |                   |
|                                     |                           |                             |                   |
| MINERAL RIGHTS OWNER (ATTACH LIST I | MORE THAN ONE)            | <del></del> .               |                   |
|                                     |                           |                             |                   |
| Same as above                       |                           | <del></del> ,               |                   |
|                                     |                           |                             |                   |
| CITY                                |                           |                             |                   |
| CITY                                |                           | STATE                       | ZIP CODE          |
|                                     |                           |                             |                   |
| SOURCE OF RIGHT TO MINE (CHECK ONE  | ):                        |                             | DATE OF AGREEMENT |
| MINERAL DEED                        |                           | LEASE                       |                   |
| WARRANTY DEED                       |                           | VERBAL AGREEMENT            |                   |
| OTHER (DESCRIBE):                   |                           |                             |                   |
| ,                                   |                           |                             |                   |
| NOTE: Each site must be shown or    | a map and be included in  | n a public notice and an ap | proved mine plan. |



P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):   |   |
|---|---|
| SHORT TERM, FOR ONE PERMIT YEAR   |   |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2004  |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR I  | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION                                       |
| AND TOPOGRAPHY.   |   |
|   |   |
| BUXTON #3, #4   |   |
|   |   |
| This plan covers a total of 5 acres containing to northern most area is approximately 3 acres and contains southernmost area is 2 acres and contains 1 small clay pridge tops and are currently being used as wildlife habi area are gentle. Vegetation consists of pasture grasses | 2 small clay pits. The it. Both of the areas are on tat. Slopes within the permit |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |
| A. TOPSOIL  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING   | IS TOPSOIL TO BE SOLD ON DISCARDED OFFSITE?                                       |
|   | YES OR X NO   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   |   |
| Topsoil will be removed using rubber-tired scrape near the pit within the permit area. We will remove 6 t all areas to be disturbed before stripping or mining beg  | o 12 inches of topsoil from   |
|   |   |
|   |   |
|   |   |
|   |   |
|   |   |
| 1   |   |
|   |   |
|   |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION  |   |
|   |   |
| M   | m   |
| Topsoil will be stored in gently sloping piles.   | Topsoil storage piles will  |
| be seeded with annual grasses, if necessary, to control   | erosion.  |

| B. SPU   | IL                             | ·   |
|----------|--------------------------------|---|
| DESCRIB  | on th                          | In the southernmost permit area containing Pit#3 the spoil will be placed the low side of the pit to form a small dam. The dam will be built using SCS Pond378 lards for Missouri.  |
|          | north<br>area<br>in Pi<br>side | In the northernmost permit area containing Pit #4 and Pit #7, Pit #7 in the half of the area will be mined first. The spoil will be placed in the low west of the pit. Pit #4 will be mined after Pit #7 and the spoil will be placed it #7. Pit #7 will be totally backfilled. A small dam will be built on the low of Pit #4 as to impound more water. The dam will be built using SCS Pond 378 dards for Missouri.   |
| C ACIE   | MATER                          | NALC.   |
|          | MATER<br>METHOD                | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
|          |                                |   |
|          | None                           |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
| ~        |                                | ATION (GIVE ALL DIMENSIONS IN FEET)   |
| DESCRIBE | LOCATIO                        | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
|          |                                |   |
|          | A11                            | the pits are circular and have a diameter of less than 150 feet.  |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
|          |                                |   |
| YES      | NO                             |   |
| _        |                                |   |
|          | X                              | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|          | $\overline{\mathbf{X}}$        | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|          |                                | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
|          |                                |   |

PAGE 2 CF 5

MO 780-1327 (12-91)

| 4 | • |
|---|---|
|   |   |
| • |   |

| RECLAMATION PLAN - 10 CSR  | 40-10.020(2)(D)2.           |                             |
|----------------------------|-----------------------------|-----------------------------|
| A. REVEGETATION (Attach ac | ditional sheets, if needed) |                             |
| REVEGETATION MIX #1        | PURPOSE OR LAND USE         | B. SEEDING OR PLANTING TIME |
| Mixture #1                 | Wildlife                    | Fall or Spring              |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES            | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE       |
|---------------------------|---------------------|-----------------------|------------------|
| Timothy                   | 5                   |                       |                  |
| Orchard Grass             | 10                  |                       |                  |
| Red Clover                | 5                   |                       |                  |
| Wheat or Oats             | 30                  |                       |                  |
| Serecea lespedeza on slop | pes 20              |                       |                  |
|                           |                     |                       |                  |
| EVEGETATION MIX #2        | PURPOSE OR LAND USE | B. SEEDING OR PLA     | I<br>INTING TIME |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------|-------------|-----------------------|------------|
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |

# B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Two one acre impoundments will be left by the mined out pits. All spoil and pit areas above the anticipated water level will be graded to traversable slopes using dozers and rubber-tired scrapers. Diversion ditches will be constructed as necessary to control erosion and runoff. Hay bales will be staked down in areas as needed to control gullies.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as the pit advances and spoil is placed in the dam and fill areas. Final grading of all disturbed areas will be completed within one year after mining is complete.

#### REPLACEMENT OF TOPSOIL

Topsoil will be laid down using rubber-tired scrapers and dozers within one year after grading is complete.

#### REVEGETATION

The site will be seeded the following Spring or Fall after topsoil replacement.

# AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12

| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation | ESTIMATED ACRES: |
|---|------------------|
| Wildlife (forest or other habitat with livestock excluded)                                | 3                |
| Agricultural (pasture, cropland, and horticultural)                                       |                  |
| Development (residential, industrial, and recreational)                                   |                  |
| Water impoundments (for wildlife, agricultural, or development)                           | 2                |

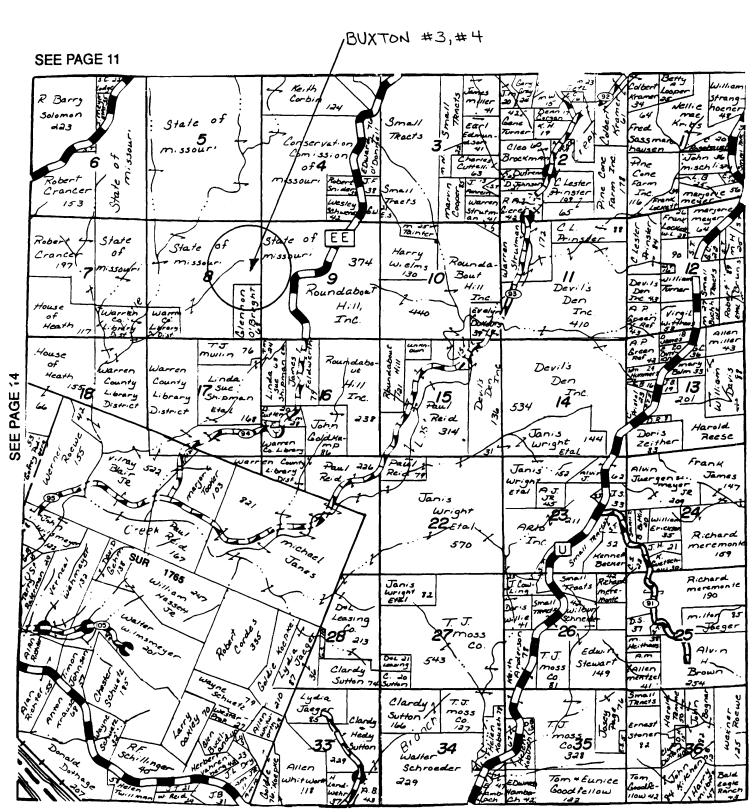
By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT       |   | TITLE                 | DATE  |
|------------------------------|---|-----------------------|---|
| Jam S Nills                  | John S. Miller                                      | Vice-President        | -Manufacturing 5-24-94  |
| NOTARY PUBLIC EMBOSSER SEAL  | STATE Q   |                       | COUNTY (OR CITY OF ST. LOUIS)   |
| V                            | Tennsylvania<br>SUBSCRIBED AND, SWORN BEFORE ME, TH | IS ,                  | Alleghe ny  |
|                              | 24th DAY OF M                                       | ay 19 94              | USE RUBBER STAMP IN CLEAR AREA BELOW  |
|                              | NOTARY PUBLIC SIGNATURE<br>Loretta M. Bottschling   | MY COMMISSION EXPIRES | Notanai Sedi Loretta M. Gottschling, Notary Public Pittsburgh, Allegheny County Pittsburgh Allegheny County Commission Expires March 20, 1995 |
|                              | NOTARY PUBLIC NAME (TYPED OR PRINTED)               | ing                   | Member, Pennsylvania Association of Notaries  |
| APPROVED BY (DIRECTOR'S REPR |   | DATE APPROVED         | PERMIT NUMBER   |
| Priari D                     | Kicki   | 7-27-                 | 94 146  |

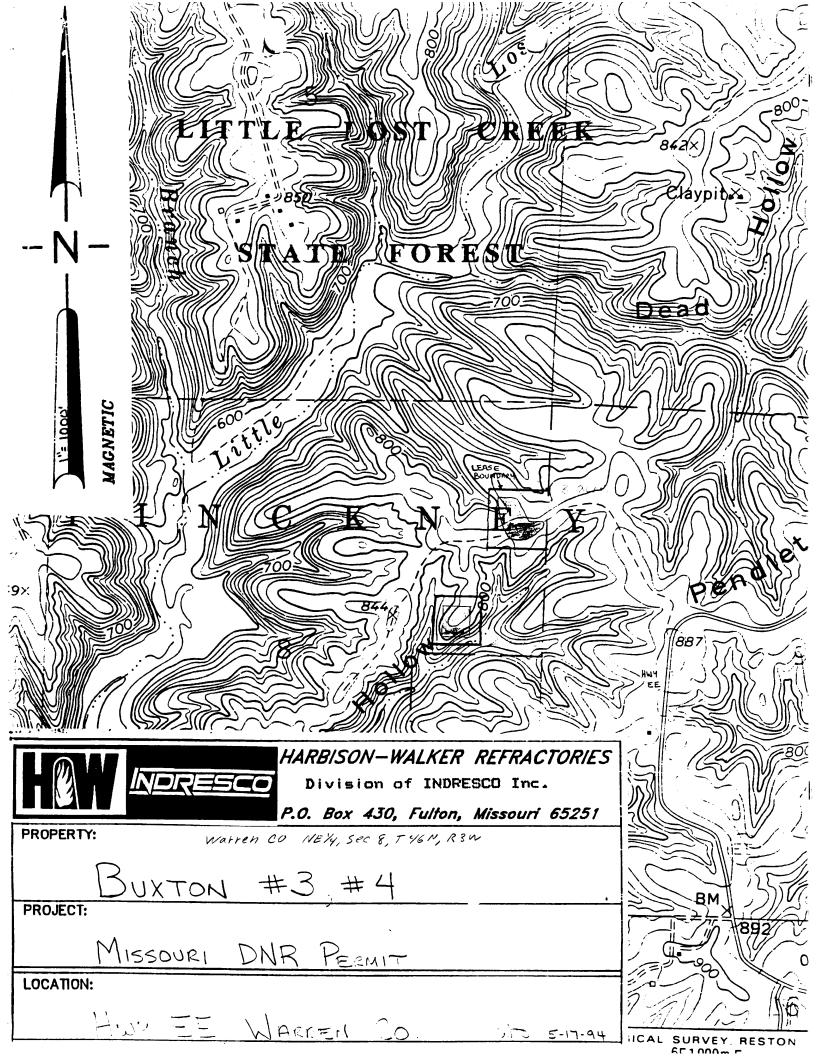
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**SEE PAGE 18** 

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# MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION

# SITE INFORMATION FORM

P.O. BOX 176 **JEFFERSON CITY, MO 65102** 

| Charles Bunten Pit #1  COMPANY MAME  Harbison-Walker Refractories Company  COUNTY  Gasconade  SE  4  TOWNSHIP  ADMRE  AU North  6 West  5  RIVER OR STREAM MAME (FOR IN-STREAM ACRES)  MINIERAL COMMODITY Fire Clay  Price Clay  STATE  MO  GS1111  SOUNCE OF RIGHT TO MINIE (CHECK ONE):  MINIERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINIERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINIERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINIERAL DEED  MARRANTY DEED  OTHER (DESCRIBE):  MINIERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO BOX 438  CITY F-Eulton  Missouri  Missouri  Missouri  Missouri  DATE OF AGREEMENT  DATE OF AGREEMEN |                   | T NUMBER                     | PERMIT I                              |                    | NAME OR NUMBER  |
|--|-------------------|------------------------------|---------------------------------------|--------------------|---|
| COUNTY Gasconade SE 4  TOWNSHIP RANGE AND COUNTY AND COUNTY Gasconade SE 4  A CRES A  ACRES A  AND COUNTY AND COUNTY FIRE Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) John Federhofer ADDRESS 4735 Idaho CITY St. Louis SURCE OF RIGHT TO MINE (CHECK ONE): MINERAL DEED WARRANTY OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-BOX 438  CITY Fulton- STATE SIATE SIATE ZIP CODE HISTORY HISTORY STATE SIATE ZIP CODE HISTORY HIS |                   | 146                          | Charles Bunten Pit #1 146             |                    |   |
| COUNTY Gasconade SE A TOWNSHIP RAMOR AO NORTH ROWS AO NORTH ADDRESS A735 Idaho CITY St. Louis MINERAL DEED MINERAL DEED MINERAL DEED MINERAL DEED MINERAL DEED MINERAL DEED MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) ADDRESS AO NORTH AND AREA MAN AGREEMENT  DOTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harthison-Walker Refractories Company  ADDRESS POBOX 438 CITY FEULLON MISSOURI M |                   |                              |                                       |                    | PANY NAME   |
| Gasconade  SE  AANOE AORES AORES AORES AO North 6 West 5   RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  MINNERAL COMMODITY Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) John Federhofer ADDRESS 4735 Idaho  CITY St. Louis  MINNERAL DEED MINNERAL DEED MARRANTY DEED DATE OF AGREEMENT  MINNERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbisoth-Walker Refractories Company  ADDRESS PO BOX 438  CITY FEUIton  RANGE ANGE ACRES AAROE ACRES ACRE |                   |                              |                                       |                    | Harbison-Walker Refractories Company                  |
| TOWNSHIP  40 North  6 West  5  RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  MINERAL COMMODITY Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) John Federhofer  ADDRESS 4735 Idaho  CITY St. Louis MO 63111  SOURCE OF RIGHT TO MINE (CHECK ONE): MINERAL DEED WARRANTY DEED WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-BOX 436  CITY -Fulton-  Missouri  STATE SUP CODE  |                   | SECTION                      |                                       | 1/4 SECTION        | ITY   |
| 40 North 6 West 5  RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  MINIMERAL COMMODITY Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  John Federhofer  ADDRESS  4735 Idaho  CITY St. Louis  STATE  MO  63111  DATE OF AGREEMENT  MINIERAL DEED  WARRANTY DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINIERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO-BOX 430  CITY  STATE  STATE  STATE  STATE  STATE  LEASE  DAVIS HARDISON-Walker Refractories Company  ADDRESS  PO-BOX 430  CITY  Fulton-  STATE  MISSOURI  MISSOURI  STATE  ZIP CODE  MISSOURI  65251  |                   | 4                            |                                       | SE                 | Gasconade   |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  MINERAL COMMODITY Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) John Federhofer  ADDRESS 4735 Idaho  CITY St. Louis STATE MO 63111  ATTE ZIP CODE MINERAL DEED LEASE VERBAL AGREEMENT  DATE OF AGREEMENT  SQUICE OF RIGHT TO MINE (CHECK ONE): VERBAL AGREEMENT  SQUICE OF RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-BOX 430  CITY Fulton-  STATE STATE ZIP CODE Missouri 65251   |                   | ACRES                        |                                       | RANGE              | NSHIP   |
| MINERAL COMMODITY Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  John Federhofer  ADDRESS  4735 Idaho  CITY St. Louis  MO  STATE MO  STATE MO  LEASE VERBAL AGREEMENT  DATE OF AGREEMENT  D |                   | 5                            |                                       | 6 West             | 40 North  |
| Fire Clay  NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  John Federhofer  ADDRESS  4735 Idaho  CITY  St. Louis  MO  STATE  MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  VERBAL AGREEMENT  DATE OF AGREEMENT  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO BOX 438  CITY  Fulton  Missouri  65251  |                   |                              |                                       |                    | R OR STREAM NAME (FOR IN-STREAM ACRES)                |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  John Federhofer  ADDRESS  4735 Idaho  CITY  St. Louis  MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO BOX 436  CITY  STATE  STATE  ZIP CODE  Hissouri  65251  | L SITES)          | ATED TONS/YEAR (FOR GRAVEL S | ESTIMA1                               |                    | RAL COMMODITY   |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  John Federhofer  ADDRESS  4735 Idaho  CITY  St. Louis  MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  LEASE  WARRANTY DEED  VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO BOX 430  CITY  Fulton  Missouri  65251   |                   |                              |                                       |                    |   |
| John Federhofer  ADDRESS 4735 Idaho  CITY St. Louis STATE MO  STATE SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED LEASE WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-Box 438  CITY Fulton Missouri STATE STATE WHSTOURI 21P CODE 65251   |                   |                              |                                       |                    | · · · · · · · · · · · · · · · · · · ·                 |
| John Federhofer  ADDRESS 4735 Idaho  CITY St. Louis STATE MO  STATE St. Louis  MINERAL DEED LEASE WARRANTY DEED OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-Box 439  CITY Fulton Missouri STATE STATE Wissouri STATE SIP CODE 65251  |                   |                              |                                       |                    |   |
| ADDRESS  4735 Idaho  CITY St. Louis MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED LEASE WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO-Box 438  CITY Fulton  STATE ZIP CODE 65251   |                   |                              |                                       | •                  | E OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)       |
| A735 Idaho  CITY St. Louis St. Louis MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED LEASE WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Company  ADDRESS PO Box 430  CITY Fullton  Missouri STATE ZIP CODE 65251  |                   |                              |                                       |                    | John Federhofer                                       |
| St. Louis  St. Louis  MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  LEASE  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  STATE  Missouri  STATE  ZIP CODE  63211  AZUL & MO  7-   |                   |                              |                                       |                    | RESS  |
| St. Louis  St. Louis  MO  63111  SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  LEASE  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 436  CITY  Fulton  MO  63111  DATE OF AGREEMENT  VERBAL AGREEMENT  STATE  Mineral RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HO 7-  ADDRESS  PO Box 436  CITY  Fulton  Mineral RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HO 7-  Mineral RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HO 8-  NO 10-  Mineral RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HO 7-  ADDRESS  PO Box 436  CITY  Fulton  |                   |                              |                                       |                    | 4735 Idaho  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  Fulton  DATE OF AGREEMENT  LEASE  VERBAL AGREEMENT  VERBAL AGREEMENT  AGUN & HO  VERBAL AGREEMENT  VERBAL AGREEMENT  VERBAL AGREEMENT  VERBAL AGREEMENT  VERBAL AGREEMENT  SAUL & MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HARDISON  STATE  Fulton  Missouri  Missouri  DATE OF AGREEMENT  VERBAL AGREEMENT  SAUL & MINERAL RIGHTS OWNER  AUCH STATE  ZIP CODE  65251   |                   | ZIP CODE                     |                                       | STATE              |   |
| MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  Fulton  LEASE  VERBAL AGREEMENT  SAUGH  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HAT STATE  FULTON  WHISSOURI  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HAT STATE  FULTON  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  HAT STATE  FULTON  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  MINERAL RIGHTS OWNE |                   | 63111                        |                                       | MO                 | St. Louis   |
| WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 436  CITY  Fulton  WERBAL AGREEMENT   VERBAL AGREEMENT    SAWL W Clark  Missouri  VERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   Missouri  VERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   Missouri  VERBAL AGREEMENT   Missouri  VERBAL AGREEMENT  Missouri  WERBAL AGREEMENT  Missouri  Missouri  VERBAL AGREEMENT  Missouri  VERBAL AGREEMENT  Missouri  VERBAL AGREEMENT  |                   | DATE OF AGREEMENT            |                                       |                    | RCE OF RIGHT TO MINE (CHECK ONE):                     |
| WARRANTY DEED VERBAL AGREEMENT  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 436  CITY  Fulton  WERBAL AGREEMENT   VERBAL AGREEMENT    SAWL W Clark  Missouri  VERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   Missouri  VERBAL AGREEMENT   SAWL W Clark  Missouri  WERBAL AGREEMENT   Missouri  VERBAL AGREEMENT   Missouri  VERBAL AGREEMENT  Missouri  WERBAL AGREEMENT  Missouri  Missouri  VERBAL AGREEMENT  Missouri  VERBAL AGREEMENT  Missouri  VERBAL AGREEMENT  |                   |                              |                                       |                    |   |
| OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  Fulton  STATE  Missouri  DAVI & HI  AUVI & HI  STATE  ZIP CODE  65251   |                   |                              | LEASE                                 |                    | MINERAL DEED  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  Fulton  Missouri  David Hitch  MO 7-   |                   |                              | VERBAL AGREEMENT                      |                    | WARRANTY DEED   |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  ADDRESS  PO Box 430  CITY  Fulton  Missouri  David Hitch  MO 7-   |                   |                              |                                       |                    | OTHER (DESCRIBE):                                     |
| Harbison-Walker Refractories Company  ADDRESS PO Box 438  CITY Fulton  Missouri  SQWL & Alwae  HO 7-  ZIP CODE  65251  |                   | <del></del>                  |                                       |                    |   |
| Harbison-Walker Refractories Company  ADDRESS PO Box 438  CITY Fulton  Missouri  SAML AP ALWYE  HO 7-  ZIP CODE  65251   |                   |                              |                                       |                    |   |
| ADDRESS PO Box 438  CITY STATE ZIP CODE Fulton Missouri 05251  | - 4 -             | _                            | 4 -                                   |                    | RAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)       |
| PO Box 438  CITY STATE ZIP CODE Fulton Missouri 65251  | 7-29-47           | HE                           | as alwaye                             | Saml               | Harbison-Walker Refractories Company                  |
| Fulton STATE ZIP CODE 65251  |                   |                              |                                       |                    |   |
| Fulton Missouri 65251  |                   | 70.000                       |                                       | 62425              |   |
|  |                   | 1                            |                                       |                    |   |
|  |                   |                              | · · · · · · · · · · · · · · · · · · · | Massouri           |   |
|  |                   | DATE OF ACREEMENT            |                                       |                    | ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )               |
| MINERAL DEED X LEASE August 10, 1950   |                   | August 10, 1950              | LEASE                                 | X                  | MINERAL DEED  |
| WARRANTY DEED VERBAL AGREEMENT   |                   |                              | VERBAL AGREEMENT                      |                    | WARRANTY DEED   |
| DECET  | 117               | DECET                        |                                       |                    |   |
| OTHER (DESCRIBE):  | IVED              |                              |                                       |                    | OTHER (DESCRIBE):                                     |
| WARRANTY DEED VERBAL AGREEMENT $RCEIV$ OTHER (DESCRIBE):  NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.  | l <del>1997</del> | - JUL 1 <sub>1</sub>         |                                       |                    |   |
| NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.  MISSOURI LANE MO 780-1036 (12-91)   | 14.               | an. MISSOLIDI                | and an approved mine plar             | in a public notice | E: Each site must be sown on a map and be included in |
| MO 780-1036 (12-91)  RECIAMATION COAAA   | DAAA415           | KEGI AMAIION CO              |                                       |                    | 0-1036 (12-91)  |

# MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION

MO 780-1327 (12-91)



Page 1

PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

| TYPE OF PLAN (CHECK ONE):  |                            |   |
|--|----------------------------|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |                            |   |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | 03/01/2007                 |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PE  | ERMITTING (BY APPLICANT OR | <br>PRIOR OPERATOR), INCLUDING SUIL, VEGETATION, AND TOPOGRAPHY.      |
| The site is moderately sloping with approxima in pasture. The soil is typical for the area, a l  |                            | otal area in open timber while the other two-thirds                   |
|  |                            |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |                            |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMI  | SSION PERMITTING           | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?                           |
| 12   | INCHES                     | YES X NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |                            |   |
| Topsoil will be removed using rubber-tired so near the pit within the permit area. We will redisturbed before mining or stripping begins.  DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE | emove the 12 inches o      | The topsoil will be stored of surficial material from all areas to be |
| Surficial material will be stored in gently slop   |                            | eeded with annual grasses, if necessary                               |
| to control erosion.  | mg phos and thin bo so     | man grasses, in necessary,  |

| B. SPOIL             |  |
|----------------------|--|
| DESCRIBE METHODS AND | LOCATION OF SPOIL PLACEMENT AND DISPOSAL   |
|                      | moved using rubber-tired scrapers and bull dozers to form a dam to the east of the pit. Slopes will be traverable slopes.  |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
| C. ACID MATERIA      | ALS  |
| DESCRIBE METHODS AND | DEQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| None                 |  |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
| PIT INFORMATIO       | N (GIVE ALL DIMENSIONS IN FEET)  |
| DESCRIBE LOCATION AN | O ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
| This pit is lo       | cated in the middle of the five acre reservation and is roughly circular in plan view.   |
|                      |  |
|                      |  |
|                      |  |
|                      |  |
|                      | DEGETTE  |
|                      | RECEIVED JUL 1 1 1997  |
|                      | JUL 1 1 1997 <b>D</b>  |
|                      | MISSOURI LAND  |
| ·                    | RECLAMATION COMMISSION   |
| YES                  | NO   |
|                      | X Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |
|                      | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and  |
|                      | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may  |
|                      | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet<br>or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is |
|                      | greater, unless a variance is granted by the Commission.)  |
|                      | Will any excavation start at or within fifty feet (50') of any property line?  (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

#### RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. A. REVEGETATION (Attach additional sheets, if needed) REVEGETATION MIX #1 PURPOSE OR LAND USE B. SEEDING OR PLANT TIME Mixture #1 Fall or Spring Agriculture

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|-----------------|-------------|-----------------------|------------|
| Tall Fescue     | 25          |                       |            |
| Red Clover      | 5           |                       |            |
| Wheat or Oats   | 30          |                       |            |
|                 |             |                       |            |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Agricultural        | Fall or Spring              |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| POUNDS/ACRE TREE OR SHRUB SPE       | ECIES STEMS/ACRE                   |
|-------------------------------------|------------------------------------|
| 10<br>6<br>30<br>20                 | ECEIVED                            |
| RECLANTS FOR ADDITIONAL SEED MIXES. | MISSOURI LAND<br>MATION COMMISSION |

MO 786-1327 (12-91)

#### **B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

# GRADING

Grading will be done as mining advances and as spoil is either backfilled or put into a dam. Final grading of all disturbed areas will be completed within one year after mining.

#### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and buildozers within one year after grading is complete.

# REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.



| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   | MISSOURI LAND<br>RECLAMATION COMMISSION |
|--|---|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES:                        |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                                       |
| Agricultural (pasture, cropland, and horticultural)  | 4                                       |
| Development (residential, industrial, and recreational)                                    | 0                                       |
| Water impoundments (for wildlife, agricultural, or development)                            | 1                                       |

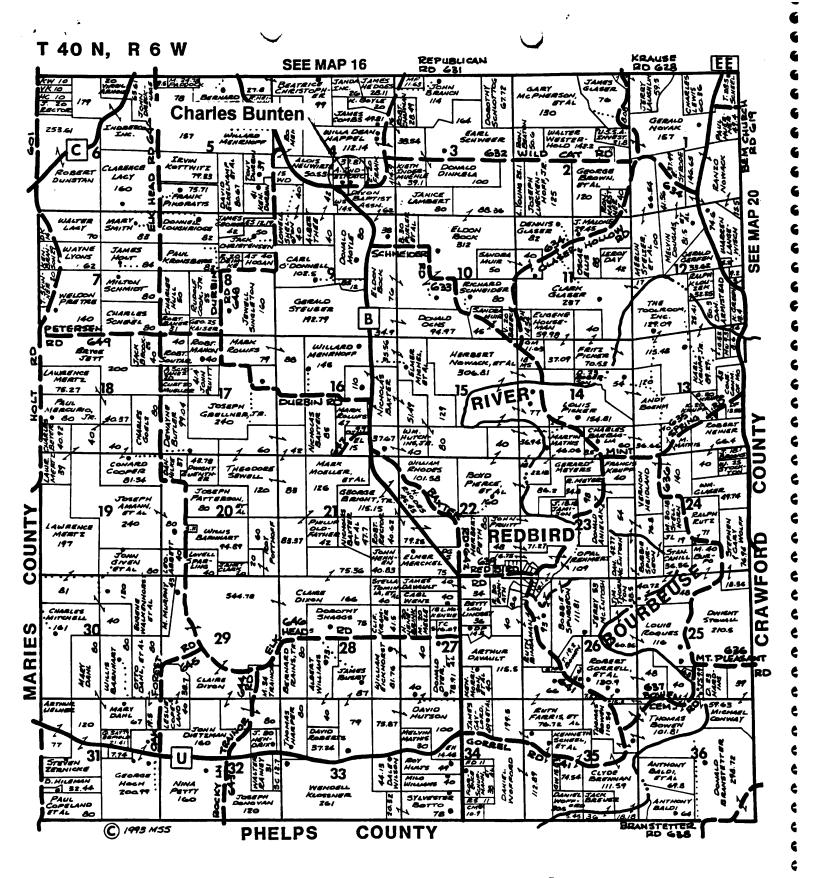
# By my signature, I attest to the following:

MO 788-1327 (12-91)

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

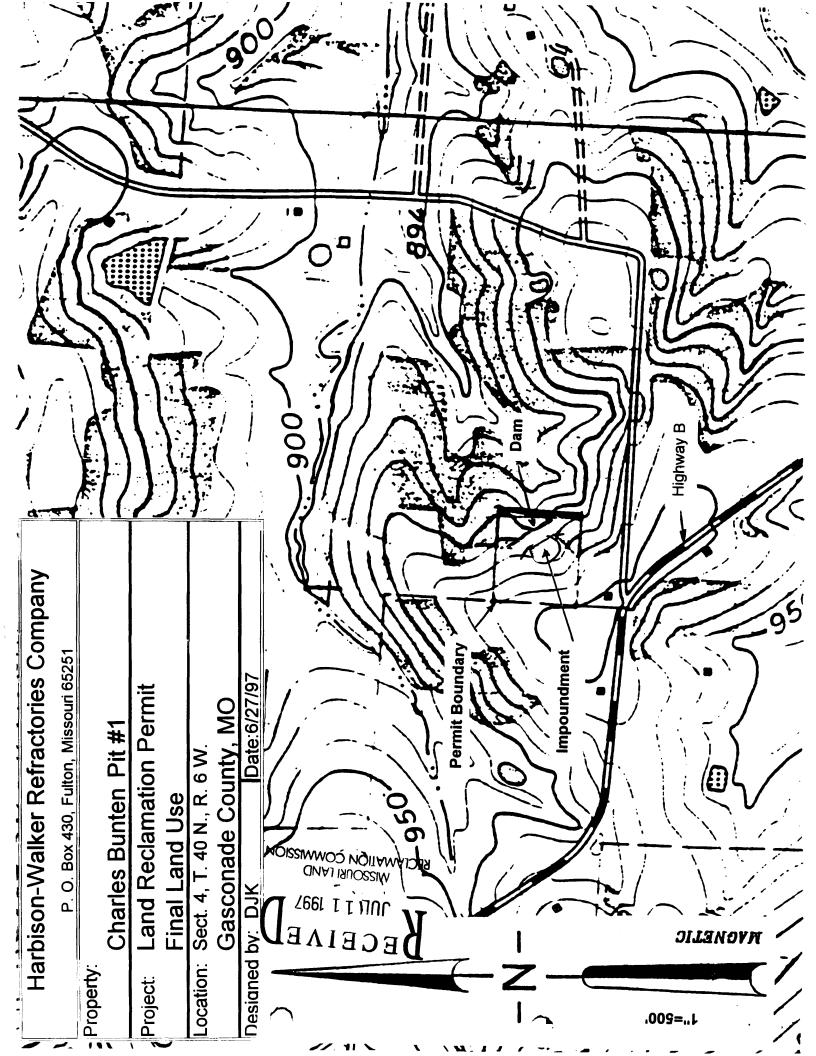
| SIGNATURE OF APPLICANT                  |                              | TITLE                   | Λ.            | 1 /   | DATE /  |
|---|------------------------------|-------------------------|---------------|---|---|
| & William K. 6                          | roun                         | Vice                    | _ 41es/2      | dent  | 13/97   |
| NOTARY PUBLIC EMBOSSER SEAL             | SUBSCRIBED AND SWORM BEFORE  | (<br>UQN/C<br>EME, THIS | 2             | COUNTY (OR CITY OF S                                    | T. LOUIS)   |
|   | DAY OF JULY                  | MY COM                  | 19 9 7        | USE RUBBER ST   | AMP IN CLEAR AREA BELOW   |
|   | NOTABY PUBLIC NAME (TYPED OR | UC SPIRES               |               | Kathleen S. Fuc<br>Pittsburgh, Alle<br>My Commission Ex | al Seal<br>hs, Notary Public<br>egheny County<br>opires Nov. 29, 1997 |
|   | Kathleen S.                  | Fuci                    | 75            | Member, Pennsylvania                                    | Association of Notaries   |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPR                    |                         | PERMIT NUMBER |   | EXPIRATION DATE   |
| Mohan Delve                             | 7-29-                        | 97                      | 146           | •   | 7-31-2007   |

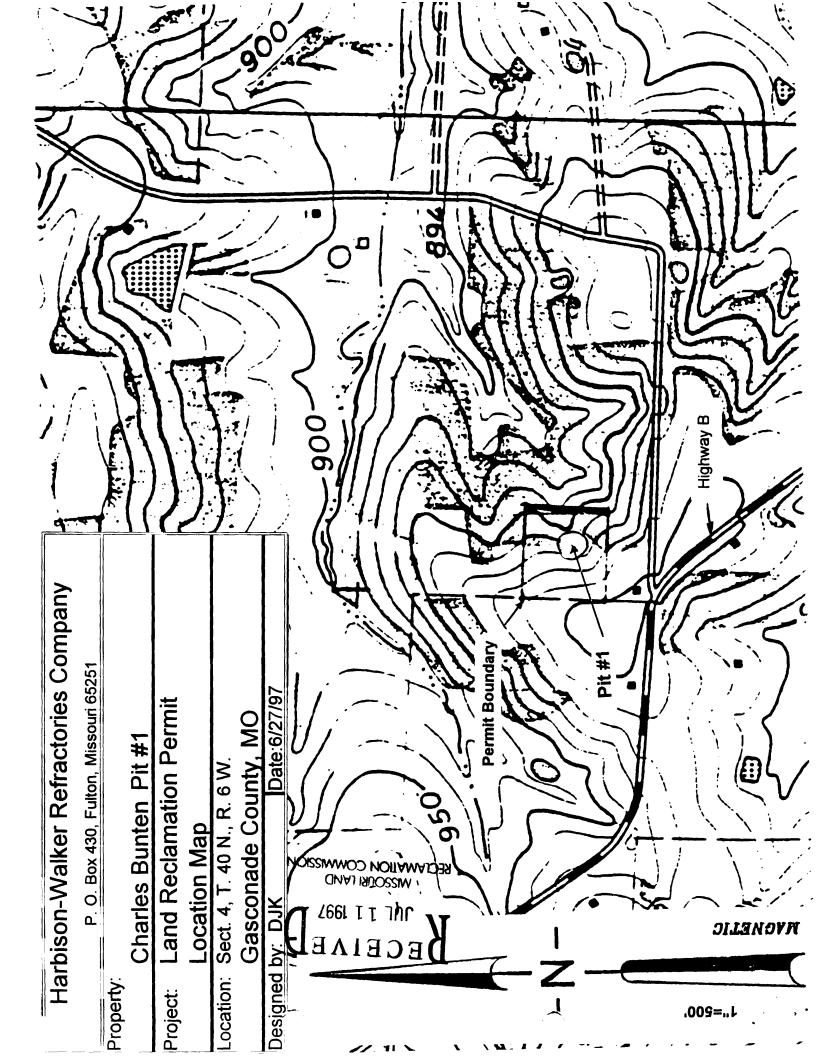
Page 5



RECEIVED
JUL 1 1 1997
MISSOURI LAND

RECIAMATION COMMISSION





# MISSOURI DEPARTMENT NATURAL RESOURCES CET LE DO LAND RECLAMATION COMMISSION NATURAL RESOURCES CET LE DO LO BOX 176 SITE INFORMATION FORM

MO 780 1046 (12.91)

JEFFERSON CITY, MO 65102

|  | MISSOURI LAND                          |   |
|--|--|---|
| SITE NAME OR NUMBER  | RECLAMATION COMMISSIONER               | MIT NUMBER  |
| Chicago Retort Property  | N <sub>2</sub>                         | 146   |
| COMPANY NAME   |  |   |
| Harbison-Walker Refractories Company   |  |   |
| COUNTY   | 1/4 SECTION                            | SECTION   |
| Montgomery   | NE 1/4                                 | 6   |
| TOWNSHIP   | RANGE                                  | ACRES   |
|  |  | İ   |
| 47 N   | 4 W                                    | 5   |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)   |  |   |
|  |  |   |
| MINERAL COMMODITY  | ESTIM                                  | NATED TONS/YEAR (FOR GRAVEL SITES)                            |
| Fire Clay  |  |   |
|  |  |   |
|  |  |   |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)   |  |   |
| A.P. Green Refractories  |  |   |
| ADDRESS  |  |   |
| P. O. Box 430  |  |   |
| CITY   | STATE                                  | ZIP CODE  |
| Fulton   | мо                                     | 65251   |
| SOURCE OF RIGHT TO MINE (CHECK ONE):   |  | DATE OF AGREEMENT   |
| Source of Month to mine (Sites Mone).  |  |   |
| MINERAL DEED   | LEASE                                  |   |
| WARRANTY DEED  | VERBAL AGREEMENT                       |   |
| C OTHER (DECORPORT)  |  |   |
| OTHER (DESCRIBE):  |  |   |
|  |  |   |
|  |  |   |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  |  |   |
| Harbison-Walker Refractories Company   |  |   |
| ADDRESS  |  |   |
| P.O. Box 430   |  |   |
| CITY   | STATE                                  | ZIP CODE  |
|  |  |   |
| Fulton   | Missouri                               | 65251   |
| SOURCE OF RIGHT TO MINE (CHECK ONE).   |  | DATE OF AGREEMENT   |
| X MINERAL DEED   | LEASE                                  | 01/03/59  |
| WARRANTY DEED  | VERBAL AGREEMENT                       |   |
|  |  |   |
| OTHER (DESCRIBE):  |  | a character of the No. N. |
| The state of the s |  |   |
| NOTE: Each site must be sown on a map and be included in a pul   | blic notice and an approved mine plan. |   |

# MISSOURI DEPARTMENT OF NATU RESOURCES LAND RECLAMATION COMMISSION



# PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES 1YPE OF PLAN (CHECK ONE)

| TYPE OF PLAN (CHECK ONE)  |   | MISSOURI LAND  |
|---|---|--|
| SHORT TERM, FOR ONE PERMIT YEAR   |   | RECLAMATION COMMISSION   |
| X LONG TERM, FOR PERIOD THROUGH DATE  | 12/31/2050  |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (E  | BY APPLICANT OR PRIOR OPERATOR), INCLUDING S  | OIL, VEGETATION, AND TOPOGRAPHY  |
| The soil is galcial alluvium supporting open st trending to the west and southwest.   | anding timber and typical unded   | rbrush. Slopes are gentle to moderate  |
|   |   |  |
|   |   |  |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |  |
|   |   |  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMI   | SSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?  |
|   | INCHES  | YES X NO   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   |   |  |
| Prior to topsoil removal and immediately follocontrol measures will be installed including st basins in any combination depending on site scrapers and/or bulldozers. The topsoil will be surficial material from all areas to be disturbed | raw bale dikes, silt fences, rock of<br>specific conditions. Topsoil will be<br>e stored near the pit within the po | check dams or sediment<br>be removed using rubber-tired<br>ermitted pit area. We will remove the |
|   |   |  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE   | AND PROTECTION  |  |
| Surficial material will be stored in gently slopi to control any erosion  | ng piles and will be seeded if ned  | cessary with a cover crop  |

| ODS AND LOCA | ATION OF SPOIL PLACEMENT AND DISPOSAL               |   |   |
|--------------|---|---|---|
| west of the  | pit. After mining is completed the spoil            | · · · · · · · · · · · · · · · · · · ·   |   |
| is wantene   | <b>u</b> .  |   | DECEIVED  |
|              |   |   | JAN 1 2 2000  |
|              |   |   | JAN 1 2 2000  |
|              |   |   | RECLAMATION COMMISSION  |
| ATERIALS     |   |   |   |
| ODS AND FQUI | PMENT USED FOR HANDLING ACID MATERIALS (IF NO       | NE IS ANTICIPATED WRITE "NONE" BELOW)   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
| AATION (G    | IVE ALL DIMENSIONS IN FEET)                         |   |   |
|              |   |   |   |
|              |   |   |   |
| site maps)   |   |   |   |
| , ,          |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
|              |   |   |   |
| NO           |   |   |   |
| Y            | Will any averagation be at an within fifty fact (50 | N) of the right of way of any public road?  |   |
|              | vull any excavation be at or within inty leet (50   | ) or the right-or-way or any public road?   |   |
|              | AACH LANGE AND  |   |   |
|              |   |   |   |
|              |   |   | }   |
|              |   |   | l, whichever is   |
|              | greater, diffess a variance is granted by the Ci    | линээон. j  |   |
|              |   |   |   |
|              | (NOTE: If the answer is "yes", a safety barrier     | may be needed )   |   |
|              | ATERIALS DOS AND FOUR MATION (G                     | NO  X Will any excavation be at or within fifty feet (50  X Will any highwall consisting of unconsolidated public road? (NOTE: For unconsolidated mate start near the right of way, and in no case may or twenty-five feet plus on an one-half (1-1/2) tigreater, unless a variance is granted by the Co.  Will any excavation start at or within fifty feet (50) | will be stockpiled adjacent to the excavation and within the permit boundary to form a west of the pit. After mining is completed the spoil will be graded into a dam or back is warrented.  ***XTERIALS**  **DOS AND FQUIIFMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED WRITE "NONE" BELOW!)  **MATION (GIVE ALL DIMENSIONS IN FEET)  **TION AND ORIENTATION OF PIT IF NOT CLEAR ON SITE MAPS  **site maps)  **NO**  **NO**  **Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?** |

Page 2

MO /80-1377 (12-91)

| . •                                      |                     | KECEIAED                                    |                    |
|--|---------------------|---|--------------------|
| RECLAMATION PLAN - 10 CSR 40-10          | 2)(D)2.             | N JAN 1 2000 D                              |                    |
| A. REVEGETATION (Attach additional sheet | ets, if needed)     | MCCO Harry                                  |                    |
| REVEGETATION MIX #1                      | PURPOSE OR LAND USE | MISSOURI LAND B SEED RECLAMATION COMMISSION | DING OR PLANT TIME |
| Mixture #1                               | Wildlife            | SION  | Fall or Spring     |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5.1.

| SEEDING SPECIES  | POUNDS/ACRE                    | TREE OR SHRUB SPECIE | STEMS/ACRE               |
|--|--------------------------------|----------------------|--------------------------|
| Orchardgrass Timothy Red Clover Korean Lespediza Wheat or Oats Serecea Lespedeza (on slopes) | 10<br>10<br>5<br>5<br>30<br>10 |                      |                          |
| VEGETATION MIX #2  | PURPOSE                        | OR LAND USE E        | SEEDING OR PLANTING TIME |
| Mixture #2   | Wildlife                       |                      | Spring or Fall           |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

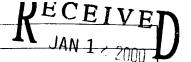
Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIE | STEMS/ACRE |
|--|---------------------|----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) (On Slopes) | 10<br>6<br>30<br>20 |                      |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES

# B GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY. INCLUDING SLOPES



Areas backfilled with spoil from the site will be graded to match the surrounding topograficate Commission:

and covered with topsoil. An impoundment will be left by the final phase of mining.

The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

# GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance whith MO 10CSR-40.10.050 (A)(10)(A).

# REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"  |                  |
|---|------------------|
| D USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                | 4                |
| Agricultural (pasture, cropland, and horticultural)                                       | 0                |
| Development (residential, industrial, and recreational)                                   | 0                |
| Water impoundments (for wildlife, agricultural, or development)                           | 1                |

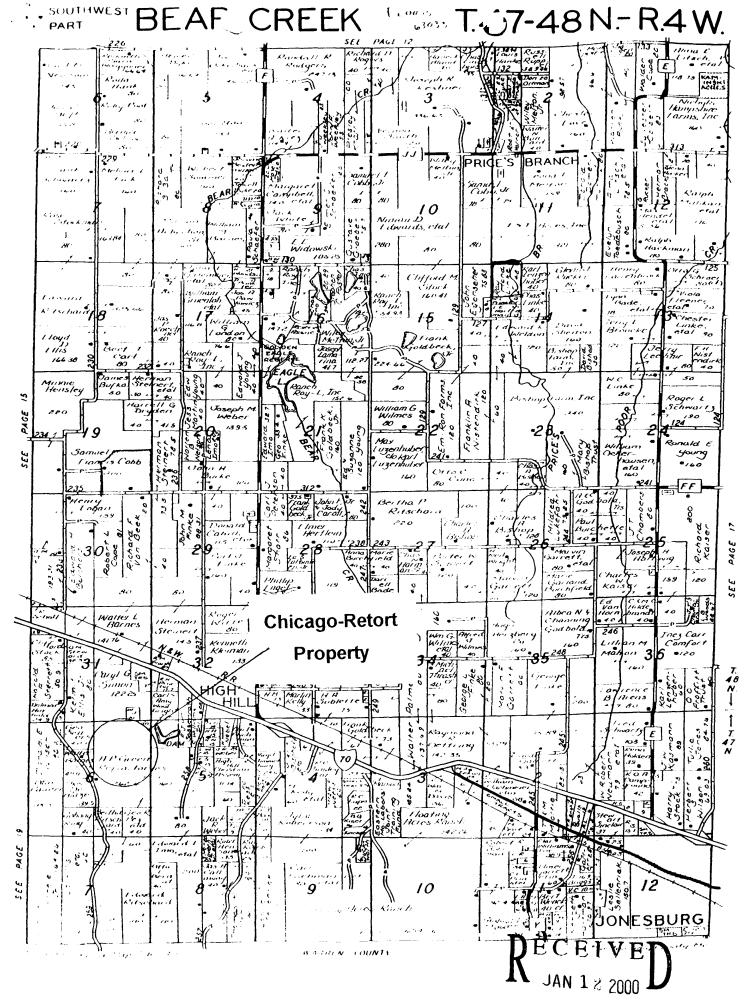


By my signature, I attest to the following:

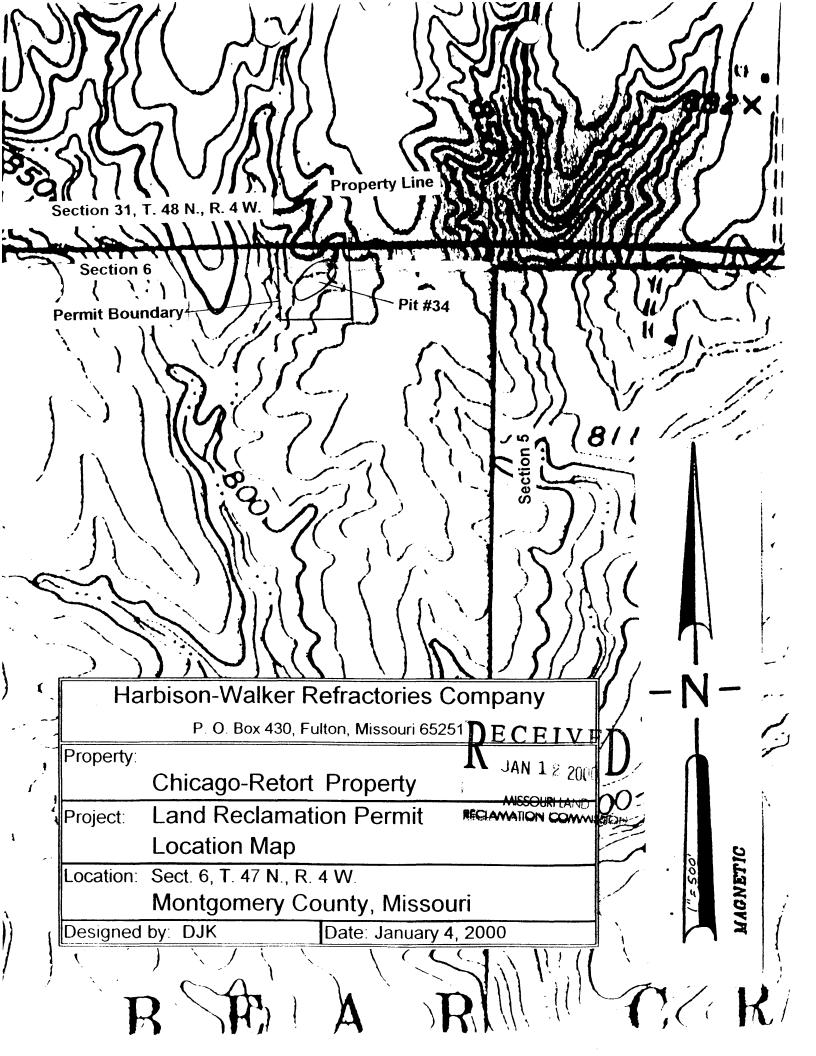
# MISSOURI LAND RECLAMATION COMMISSION

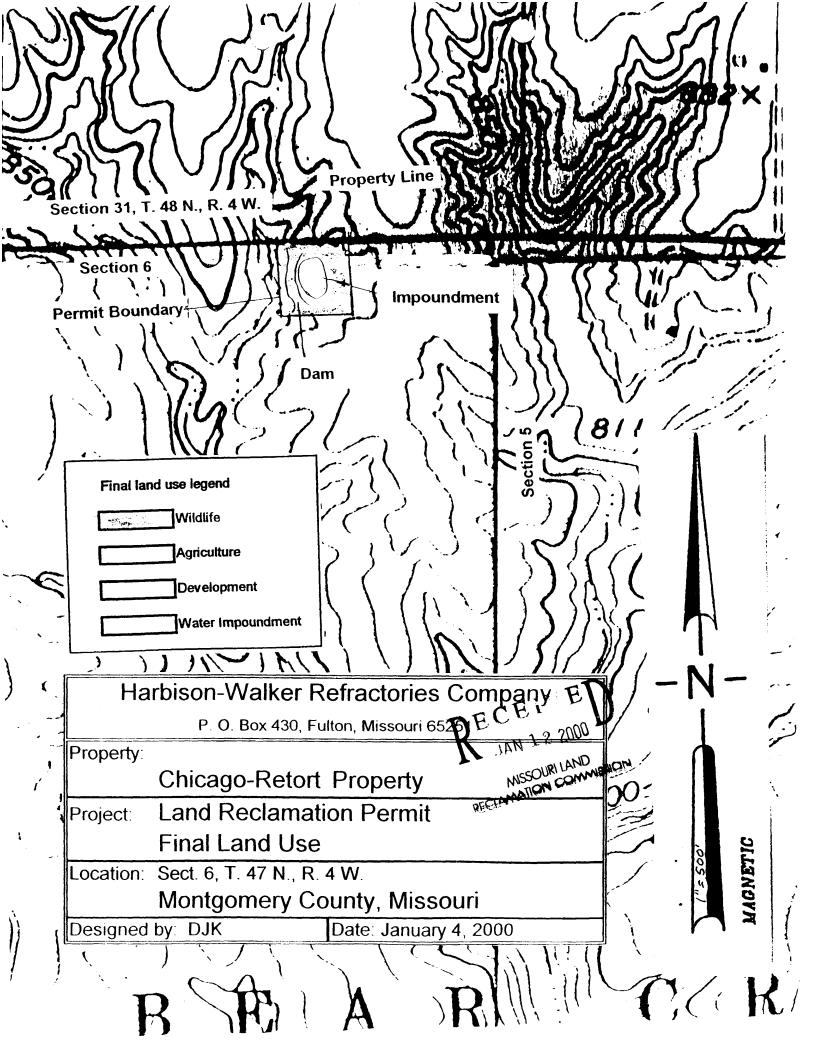
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                |   | rie<br>Min Sipenvisco         | 2_                                       |
|---------------------------------------|---|-------------------------------|--|
| NOTARY PUBLIC EMBOSSER SEAL           | STATE<br>MISSOUSE                                   |                               | Callaway                                 |
|                                       | SUBSCRIBED AND SWORN BEFORE ME, T                   |                               | USE RUBBER STAMP IN CLEAR AREA BELOW HER |
|                                       | NOTARY PUBLIC SIGNATURE  KANEN S LUCKEN             | MY COMMISSION EXPIRES 7-18-03 | NOTARY PUBLIC<br>TATE OF MISSOURI        |
|                                       | NOTARY PUBLIC NAME (TYPED OR PRINT)  Kaven 5 Luther | ED)                           | number, I MAHRES JOEY 10, 000            |
| APPROVED BY (DIRECTOR'S REPRESENTATIV | E) DATE APPROVE                                     | D PERMIT NUMBER               |  |



MISSOURI LAND RECLAMATION COMMISSION





| To be completed for each separate a   | rea of disturbance associated | with mining operation     | ns.                |       |
|---------------------------------------|-------------------------------|---------------------------|--------------------|-------|
| SITE NAME OR NUMBER                   |                               | PERMIT NUMBER             |                    | _ ==  |
| Craghead                              |                               | 77-146 and 78-146- ECEIVE |                    | 3 4.0 |
| COMPANY NAME                          |                               |                           |                    |       |
| Harbison-Walker Refractor             | ies, a division of IN         | DRESCO, Inc.              | AUG 2 8 1992       |       |
| COUNTY                                | 1/4 SECTION                   |                           | SECTION MADELLA    |       |
| Callaway                              | Northwest quar                | ter                       | 7 RECLAMATION COMM | SSION |
| TOWNSHIP                              | RANGE                         |                           | ACRES              |       |
| 46 North                              | 9 West                        |                           | 3                  | •     |
| IIVER OR STREAM NAME (FOR IN-STREAM A | ACRES)                        |                           |                    |       |
|                                       | ,                             |                           |                    |       |
| MINERAL COMMODITY                     |                               | ESTIMATED TONS/YEAR (     | FOR GRAVEL SITES)  |       |
| Clay                                  |                               |                           |                    |       |
|                                       |                               |                           |                    |       |
|                                       |                               |                           |                    |       |
| IAME OF LANDOWNER (ATTACH LIST IF MOI | RE THAN ONE)                  |                           |                    |       |
| Amos Haymart                          |                               |                           |                    |       |
| DDRESS                                |                               |                           |                    |       |
| Route 6                               |                               |                           |                    |       |
| ITY                                   |                               | STATE                     | ZIP CODE           |       |
| Fulton                                |                               | Missouri                  | 65251              |       |
| OURCE OF RIGHT TO MINE (CHECK ONE):   |                               |                           | DATE OF AGREEME    | NT    |
| X MINERAL DEED                        | C                             | LEASE                     | January 20,        | 1943  |
| WARRANTY DEED                         |                               | VERBAL AGREEMENT          |                    |       |
| OTHER (DESCRIBE):                     |                               |                           |                    |       |
|                                       |                               |                           |                    |       |
|                                       |                               |                           |                    |       |
|                                       |                               |                           |                    |       |
| INERAL RIGHTS OWNER (ATTACH LIST IF M |                               |                           |                    |       |
| Harbison-Walker Refractor             | ies                           |                           |                    |       |
| DDRESS                                |                               |                           |                    |       |
| P. O. Box 430, 1301 Westm             | inster Avenue                 |                           |                    |       |
| TY                                    | [8                            | STATE                     | ZIP CODE           |       |
| Fulton                                |                               | Missouri                  | 65251              |       |
| OURCE OF RIGHT TO MINE (CHECK ONE):   |                               |                           | DATE OF AGREEMEN   | NT    |
| MINERAL DEED                          |                               | LEASE                     |                    |       |
| WARRANTY DEED                         |                               | VERBAL AGREEMENT          | <u> </u>           |       |
| ··· · · · · · · · · · · · · · · · ·   |                               |                           |                    |       |



Not applicable.

P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):  |  |
|--|--|
| SHORT TERM, FOR ONE PERMIT YEAR  |  |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2002   |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICAN AND TOPOGRAPHY. | T OR PRIOR OPERATOR), INCLUDING SOIL. VEGETATION |
| CRAGHEAD   |  |
| This plan covers an area of approximately three acre   | es total. The permit area was a                  |
| poorly kept pasture with small branch running through the  | center. The area has slopes of                   |
| 3 - 5 percent. The area to the immediate south is woods.   | A pre-law pit lies adjacent to                   |
| the permit area on the north side. Harbison-Walker mined   | these pre-law pits in the 1960s.                 |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |  |
| A. TOPSOIL   |  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING                        | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?      |
| <u>6 - 12</u> INCH   | ES YES OR X NO                                   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |  |
| Site mined prior to 1990. No topsoil saved. We will eith   | ner uncover the buried topsoil                   |
| or use a soil that is suitable for plant growth.   | top discover the pariou topooti                  |
| or doe a corr that is saltable for plant growen.   |  |
|  |  |
|  |  |
|  |  |
|  | (ECEIVE)   |
|  | <b>X</b>   |
|  | AUG 2 8 1992                                     |
|  |  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION                           | RECLAMATION COIVING SSION                        |

| B. SPC   |                            |   |
|----------|----------------------------|---|
| DESCRIB  | E METHOD                   | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| A11      | the ol                     | ld spoil will be graded to traversable slopes using scrapers and dozers. Some of  |
|          | spoil                      | may be pushed in the pit to achieve a 3:1 or less slope.  |
|          |                            | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| DESCRIBI | <b>NFORMA</b><br>E LOCATIO | NTION (GIVE ALL DIMENSIONS IN FEET) N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS S been mined. Not applicable.   |
|          |                            |   |
| YES      | NO                         |   |
|          | X                          | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|          | X                          | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|          | X                          | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

| RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. |                       |                             |  |  |
|---|-----------------------|-----------------------------|--|--|
| A. REVEGETATION (Attach additions           | al sheets, if needed) |                             |  |  |
| REVEGETATION MIX #1                         | PURPOSE OR LAND USE   | B. SEEDING OR PLANTING TIME |  |  |
| Mixture #1                                  | Pasture               | Fall or Spring              |  |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
| REVEGETATION MIX #Z | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2          | Pasture             | Fall or Sp            | ring       |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                   | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------------------------|-------------|-----------------------|------------|
| Orchard Grass                    | 10          |                       |            |
| Korean Lespedeza                 | 6           |                       |            |
| Wheat or oats                    | 30          |                       |            |
| Use serecea lespedeza on slopes. | 20          |                       |            |
|                                  |             |                       |            |
|                                  |             |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

| RG | R | Δ | n | IN | G |
|----|---|---|---|----|---|

| DESCRIBE PROPOSED | RECLAIMED TOPOGRAP | HY INCLLIDING | SLOPES |
|-------------------|--------------------|---------------|--------|

All spoil and pit areas above the anticipated water level will be graded to traversable slopes. An impoundment will be left where the pit is. Terraces will be built as necessary to control erosion.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

# GRADING

Grading will begin as soon as practical. Grading is expected to be complete in 1994.

# REPLACEMENT OF TOPSOIL

A suitable soil for plant growth will be spread over the disturbed area as soon as grading is complete.

# REVEGETATION

All disturbed areas will be seeded in the first spring or fall after final grading.

# AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

6 - 12 inches

| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation | ESTIMATED ACRES: |
|---|------------------|
| Wildlife (forest or other habitat with livestock excluded)                                |                  |
| Agricultural (pasture, cropland, and horticultural)                                       | 1                |
| Development (residential, industrial, and recreational)                                   |                  |
| Water impoundments (for wildlife, agricultural, or development)                           | 2                |

By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT      | _  | TITLE                       | T          | DATE                      |
|-----------------------------|--|-----------------------------|------------|---------------------------|
| Jeffrey P. Jahn             | System.  | Manager-<br>Mining & Exploi | ation      | 2/17/62                   |
| NOTARY PUBLIC EMBOSSER SEAL | SUBSCRIBED AND SWORN BEFORE ME. THE DAY OF MILE NOTARY PUBLIC SIGNATURE  Loretta M. Lottschlin | MY COMMISSION               | USE RUBBER | STAMP IN CLEAR AREA BELOW |
|                             | Loretta M. Stotesc   | h ' ya                      |            |                           |
| APPROVED BY (DIRECTOR'S F   | REPRESENTATIVE)  | DATE APPROVED               | \$         | PERMIT NUMBER             |

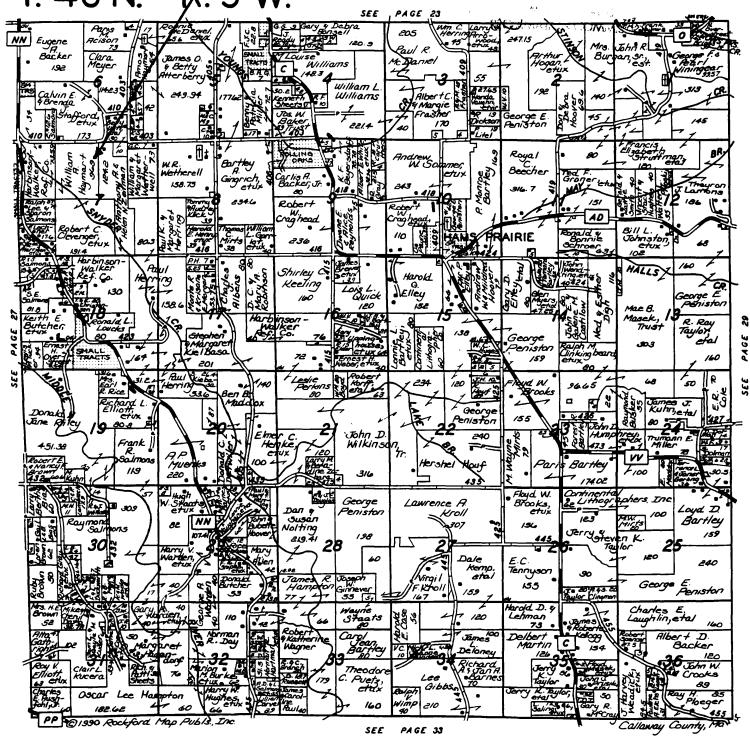
Callaway

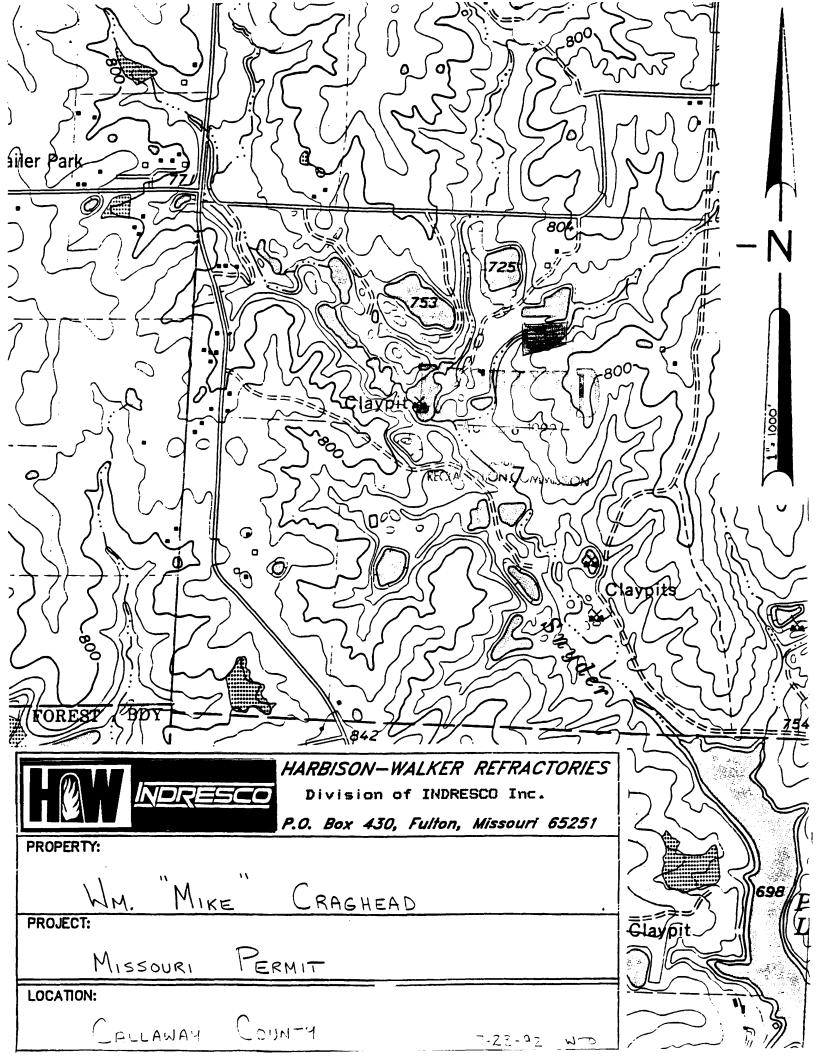
CRAGHEAD

RECEIVED

AUG 2 8 1992

<sup>28</sup> T. 46 N. – F. 9 W.





# MISSOURI DEPARTMENT NATURAL RESOURCE ECEVET LAND RECLAMATION COMMISSION

SITE INFORMATION FORM

MO 780 1036 (12-91)

P.O. BOX 176 JEFFERSON CITY, MO 65102

| JITE IN ORMATION ORM   | MISSOURI CAND                                       |                                   |  |
|--|---|-----------------------------------|--|
| ITE NAME OR NUMBER   | DEDINE WHOSE  |                                   |  |
| Farnberg Pit 1A  |   |                                   |  |
| OMPANY NAME  |   |                                   |  |
| Harbison-Walker Refractories Compa   | anv   |                                   |  |
| OUNTY  | 1/4 SECTION   | SECTION                           |  |
| Gasconade  | SW 1/4  | 30                                |  |
| OWNSHIP  | RANGE   | ACRES                             |  |
| 43 N   | 5 W   | 10                                |  |
|  | 3 44  | 10                                |  |
| IVER OR STREAM NAME (FOR IN-STREAM ACRES)  |   |                                   |  |
| INERAL COMMODITY   | ESTIMAT   | ED TONS/YEAR (FOR GRAVEL SITES)   |  |
| Fire Clay  |   |                                   |  |
| The Glay   |   |                                   |  |
|  |   |                                   |  |
| AME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  |   |                                   |  |
| Waste Management, Inc.   |   |                                   |  |
| DDRESS   |   |                                   |  |
|  | uito 1000 B O Box 7070                              |                                   |  |
| I WO Wesinfook Corporate Center St   | INCE 1000 P O BOX /0/0                              |                                   |  |
| Two Westbrook Corporate Center, Su   |   | ZIP CODE                          |  |
| יווי   | STATE   | ZIP CODE                          |  |
| Westchester  |   | 60154                             |  |
| Westchester  | STATE   | İ                                 |  |
| Westchester  | STATE   | 60154                             |  |
| Westchester SOURCE OF RIGHT TO MINE (CHECK ONE):   | STATE<br>IL   | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  | IL LEASE  | 60154                             |  |
| Westchester OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  | IL LEASE  | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  | IL LEASE  | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  | IL LEASE  | 60154                             |  |
| Westchester OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  | IL LEASE  | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):   | IL LEASE VERBAL AGREEMENT                           | 60154                             |  |
| Westchester OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)   | IL LEASE VERBAL AGREEMENT                           | 60154                             |  |
| Westchester OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Compa   | IL LEASE VERBAL AGREEMENT                           | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Compa  | IL LEASE VERBAL AGREEMENT                           | 60154                             |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  DDRESS  P.O. Box 430  | LEASE VERBAL AGREEMENT  STATE                       | DATE OF AGREEMENT  ZIP CODE       |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  WINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  DORESS  P.O. Box 430  | IL LEASE  VERBAL AGREEMENT  any                     | DATE OF AGREEMENT  ZIP CODE 65251 |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Compa  | LEASE VERBAL AGREEMENT  STATE                       | DATE OF AGREEMENT  ZIP CODE       |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  WINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  DORESS  P.O. Box 430  | LEASE VERBAL AGREEMENT  STATE                       | DATE OF AGREEMENT  ZIP CODE 65251 |  |
| Westchester  OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  DDRESS  P.O. Box 430  TY  Fulton  OURCE OF RIGHT TO MINE (CHECK ONE):                 | LEASE VERBAL AGREEMENT  STATE Missouri              | ZIP CODE 65251  DATE OF AGREEMENT |  |
| Westchester OURCE OF RIGHT TO MINE (CHECK ONE):  MINERAL DEED  WARRANTY DEED  OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Company  DDRESS  P.O. Box 430  MIY  Fulton  OURCE OF RIGHT TO MINE (CHECK ONE):  X MINERAL DEED | any  STATE  Missouri  LEASE  LEASE  LEASE  Missouri | ZIP CODE 65251  DATE OF AGREEMENT |  |

# MISSOURI DEPARTMENT OF NATU RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



| TYPE OF PLAN (CHECK ONE)   |  | PECIAAATION CO  |
|--|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |  | RECLAMATION COMMISSION  |
| X LONG TERM. FOR PERIOD THROUGH DATE   | 12/31/2050   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | G (BY APPLICANT OR PRIOR OPERATOR), INC.   | LUDING SOIL VEGETATION AND TOPOGRAPHY   |
| The soil is rocky loam, vegetation consists of Slopes are very gentle to flat  | of open pasture with typical p   | easture grasses.  |
|  |  |   |
|  |  |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM  | MISSION PERMITTING   | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
|  | 2INCHES  | YES X NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOV.   | AL   |   |
| Prior to topsoil removal and immediately fo control measures will be installed including basins in any combination depending on sit scrapers and/or bulldozers. The topsoil will surficial material from all areas to be disturb | straw bale dikes, silt fences,<br>e specific conditions. Topsoi<br>be stored near the pit within | rock check dams or sediment I will be removed using rubber-tired the permitted pit area. We will remove the |
|  |  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE  | GE AND PROTECTION  |   |
| Surficial material will be stored in gently sloto to control any erosion .   | ping piles and will be seeded  | if necessary with a cover crop  |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |

| , ,                                   |   |
|---------------------------------------|---|
| B SPOIL                               | DI OCATION DE STOUL DI ACENENT AND DISPOSAL   |
| DESCRIBE METHODS AND                  | D LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| •                                     | stockpiled adjacent to the excavation and within the permit boundary to form a dam east of the pit. After mining is completed the spoil will be graded into a dam or backfilled in the rented.  |
|                                       | DECEIVED  |
|                                       | RECEIVED  |
|                                       | JAN 1 8 2000 D  |
| 1                                     | MISSOLIBLIANG   |
|                                       | MISSOURI LAND RECLAMATION COMMISSION  |
| C. ACID MATERI                        |   |
| DESCRIBE METHODS AN                   | D EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED. WRITE "NONE" BELOW)   |
| None                                  |   |
| None                                  |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
| PIT INFORMATIO                        | DN (GIVE ALL DIMENSIONS IN FEET)  |
|                                       | D ORIENTATION OF PIT IF NOT CLEAR ON SITE MAPS  |
|                                       |   |
| (See site m                           | ans)  |
| (See Site III)                        | α <i>μο γ</i>   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
|                                       |   |
| , , , , , , , , , , , , , , , , , , , |   |
| YES NO                                |   |
|                                       | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                                       |   |
| <u> </u>                              | ACH and book and a constitute of the constitute |
|                                       | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may   |
|                                       | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|                                       | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is  |
|                                       | greater, unless a variance is granted by the Commission.)   |
| X                                     | Will any excavation start at or within fifty feet (50') of any property line?   |
|                                       | (NOTE If the answer is "yes", a safety barrier may be needed.)  |
|                                       |   |
| MO 780 1327 (12-91)                   | Page 2  |

| RECLAMATION PLAN - 10 CSR 40-10.0—(2)     | $\bigcirc$          |                         |
|---|---------------------|-------------------------|
| A. REVEGETATION (Attach additional sheets | s, if needed)       |                         |
| REVEGETATION MIX #1                       | PURPOSE OR LAND USE | B SEEDING OR PLANT TIME |
| Mixture #1                                | Development         | Fall or Spring          |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast Re-seeding will be done as needed to achieve a suitable stand.

MISSOURI LAND

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES   | POUNDS/ACRE        | TREE OR SHRUB SPECIE | STEMS/ACRE |
|---|--------------------|----------------------|------------|
| Tall Fescue<br>Red Clover<br>Lespediza<br>Wheat or Oats | 25<br>5<br>5<br>30 |                      |            |
|   |                    |                      |            |

VEGETATION MIX #2PURPOSE OR LAND USEB SEEDING OR PLANTING TIMEMixture #2DevelopmentSpring or Fall

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

| SEEDING SPECIES  | POUNDS/ACRE               | TREE OR SHRUB SPECIE | STEMS/ACRE |
|--|---------------------------|----------------------|------------|
| Orchard Grass Timothy Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>10<br>6<br>30<br>20 |                      |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

# B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. An impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

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MISSOURI LAND

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### **GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

# REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance whith MO 10CSR-40.10.050 (A)(10)(A).

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES)

| D USE OF LAND WHEN RECLAIMED                                    |                  |
|---|------------------|
| Estimate acreage of each land use below, after reclamation:     | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)      | 0                |
| Agricultural (pasture, cropland, and horticultural)             | 0                |
| Development (residential, industrial, and recreational)         | 6                |
| Water impoundments (for wildlife, agricultural, or development) | 4                |

-12"

мо zви-1327 (12-91) Page 4

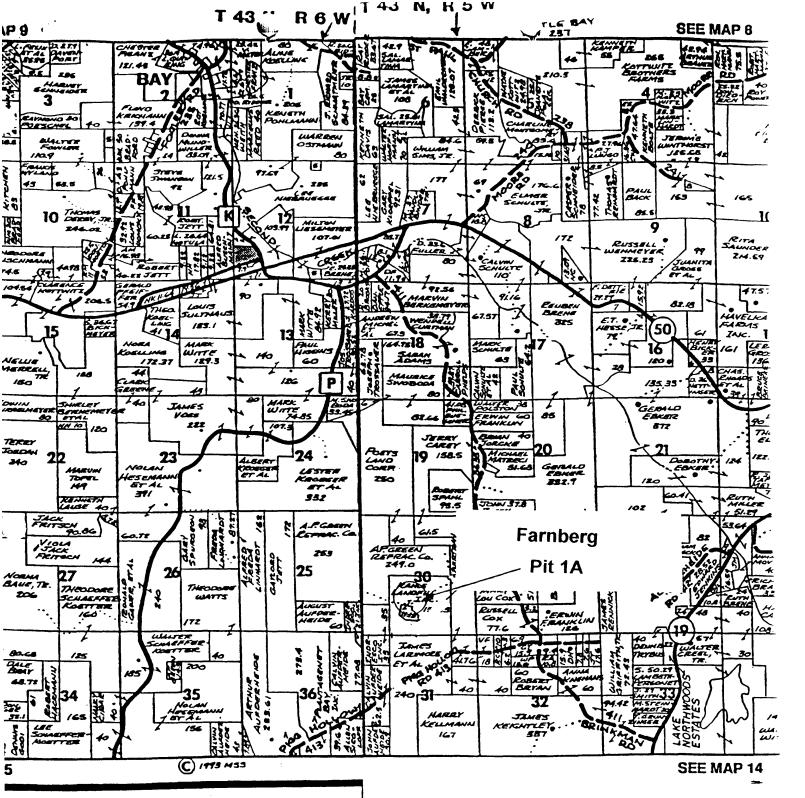


By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  |   | Min Supon.    | sm                                      |
|---|---|---------------|---|
| NOTARY PUBLIC EMBOSSER SEAL             | MISsouri                                |               | COUNTY (OR CITY OF ST. LOUIS)           |
|   | SUBSCRIBED AND SWORN BEFORE N           | •             | USE RUBBER STAMP IN<br>CLEAR AREA BELOW |
|   | NOTARY PUBLIC SIGNATURE  Kalen S Lucker | EXPIRES N ST. | OTARY CE OF MISSOURI                    |
|   | NOTARY PUBLIC NAME (TYPED OR PE         | RINTED) CAL   | AWAY COUNTY SOLON EXPIRES JULY 18, 2003 |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPI                               |               |   |



## TER STORE INC. LING OIL CO.

MISSOURI 65062

M CUPPLIES SINCE 1893

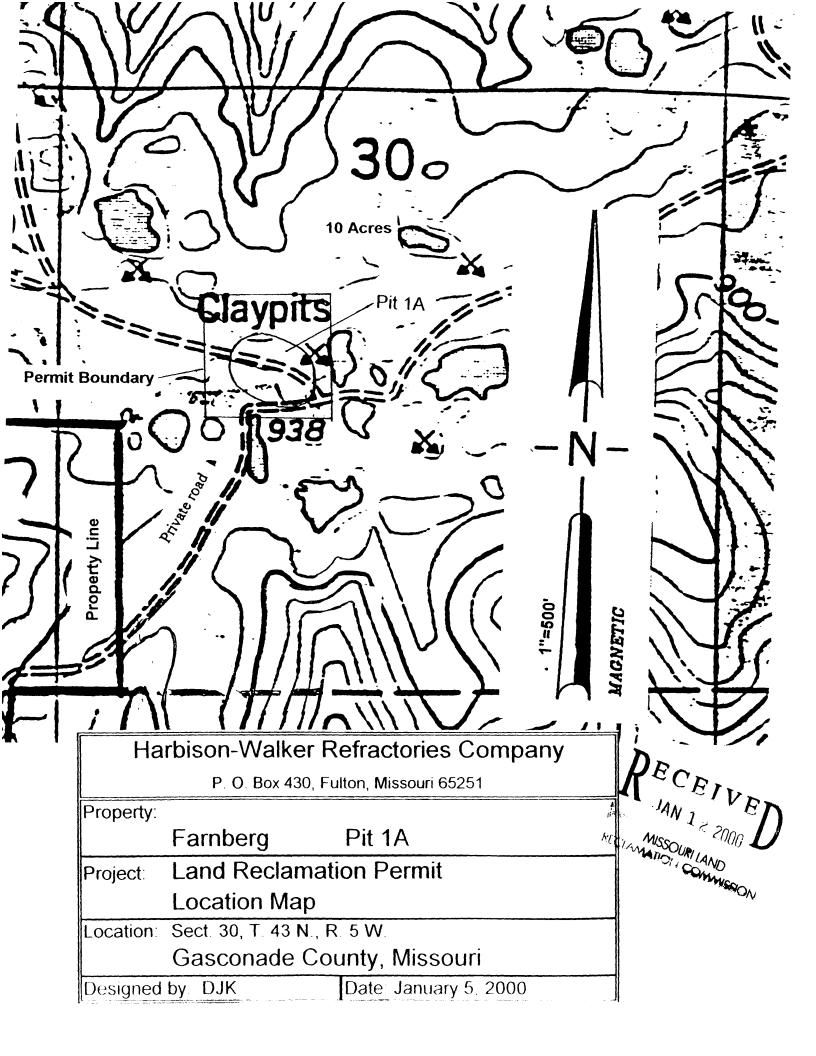
Lubricants

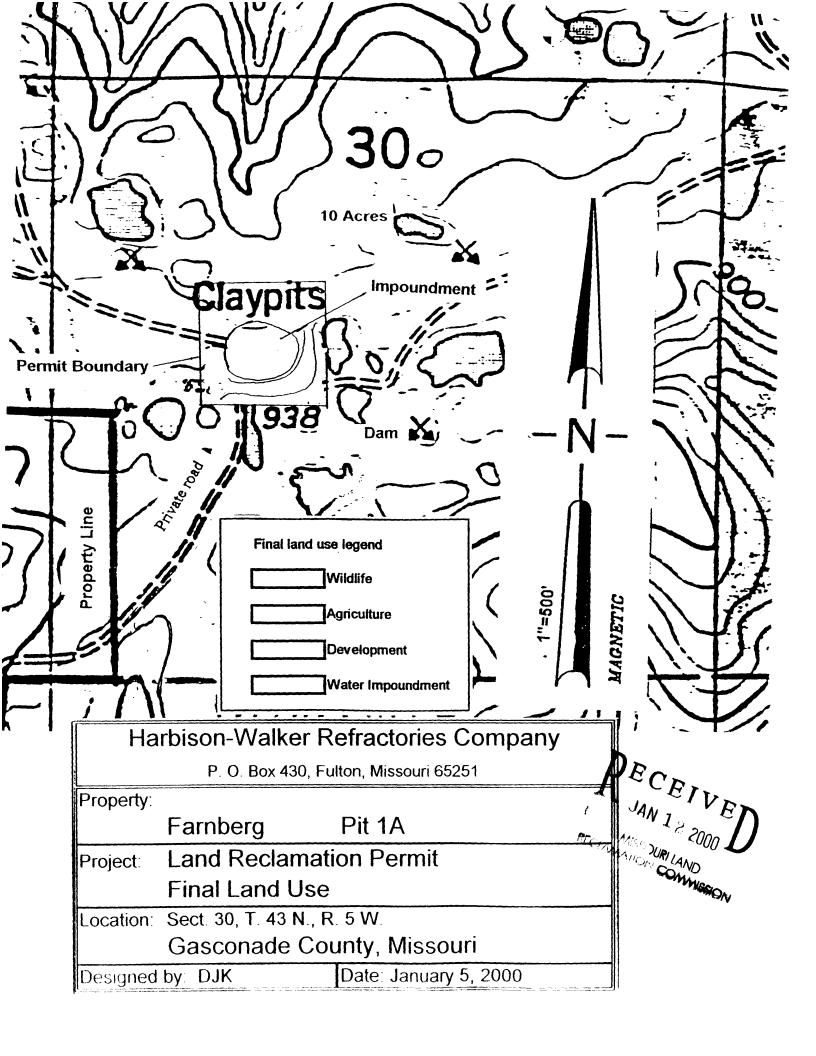
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MISSOURI LAND
RECLAMATION COMMISSION

21 or 943-6393

**MAP** 11







MO 780-1036 (12-91)

| SITE NAME OR NUMBER                     | <del> </del>          | PERMIT NUMBER                 |                        |  |
|---|-----------------------|-------------------------------|------------------------|--|
| Gerding #5, #6, #8                      |                       | 86-146-A1                     | 84-146                 |  |
| COMPANY NAME                            |                       | <u> </u>                      |                        |  |
| Harbison-Walker Refractor               | ries, Division of IND | ORESCO, Inc.                  |                        |  |
| COUNTY                                  | 1/4 SECTION           |                               | SECTION                |  |
| Warren                                  | Northeast Qua         | rtor                          | 6                      |  |
| TOWNSHIP                                | RANGE                 |                               | ACRES                  |  |
| 46 North                                | 2 West                |                               |                        |  |
| RIVER OR STREAM NAME (FOR IN-STREAM A   |                       |                               | 15                     |  |
| , | iones)                |                               |                        |  |
|   |                       |                               |                        |  |
| MINERAL COMMODITY                       |                       | ESTIMATED TONS/YEAR           | R (FOR GRAVEL SITES)   |  |
| Clay                                    |                       |                               |                        |  |
|   |                       |                               | DECEIVED               |  |
| NAME OF LANDOWNER (ATTACH LIST IF MO    | RE THAN ONE)          |                               | M CLL V 52             |  |
| Jerry Williams et. ux.                  | ,                     |                               | 6 / C 4002             |  |
| ADDRESS                                 |                       |                               | AUG 2 8 1992           |  |
|   |                       |                               | North And              |  |
| Route 3                                 |                       |                               | RECIAMATION CONVISSION |  |
| CITY                                    |                       | STATE                         | ZIP CODE               |  |
| Warrenton                               |                       | Missouri                      | 63383                  |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):    |                       | _                             | DATE OF AGREEMENT      |  |
| MINERAL DEED                            |                       | LEASE                         |                        |  |
| WARRANTY DEED                           |                       | VERBAL AGREEMENT              | . ————                 |  |
| OTHER (DESCRIBE): Pits have             | been mined and miner  | al rights releas              | sed to above owner.    |  |
|   |                       |                               |                        |  |
|   |                       |                               |                        |  |
|   |                       |                               |                        |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF N  | IORE THAN ONE)        |                               |                        |  |
| Same as above                           |                       |                               |                        |  |
| DDRESS                                  |                       |                               |                        |  |
|   |                       |                               |                        |  |
| CITY                                    |                       | STATE                         | ZIP CODE               |  |
|   |                       |                               |                        |  |
| OURCE OF RIGHT TO MINE (CHECK ONE):     |                       |                               | DATE OF ACREEMENT      |  |
| MINERAL DEED                            | 1                     | LEASE                         | DATE OF AGREEMENT      |  |
| _                                       | ;<br>                 | □ LEASE<br>□ VERBAL AGREEMENT |                        |  |
| WARDANEY OFFE                           |                       | I IVEDDALAGDEEMENT            |                        |  |
| UWARRANTY DEED  OTHER (DESCRIBE):       |                       | - VENDAL AGREEMENT            |                        |  |

P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):  |   |
|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |   |
| August 1, 2002.  |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OF AND TOPOGRAPHY.   | R PRIOR OPERATOR), INCLUDING SOIL. VEGETATION       |
| Gerding #5, #6, #8.  |   |
| This plan covers a total of 15 acres consisting of three claywere wooded hillsides with slopes of 5 to 10 percent. The to Gerding #8 was a ridge top pasture. Firetower Road is just three pits have been graded and seeded. All three pits were | opsoil was a thick clay.<br>east of Gerding #8. All |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |   |
| A. TOPSOIL   |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?         |
| INCHES   | YES OR X NO   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |   |
| Not applicable - In reclamation. Mined prior to 1990.  |   |
|  | ECEIVE  |
|  | AUG 2 8 1992  |
|  | Napolijani te Miji                                  |
| RE   | CLAMATION COPENION                                  |
|  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |   |
| Not applicable - In reclamation.   |   |
|  |   |
|  |   |
|  |   |

| •           | •          |   |
|-------------|------------|---|
| B. SPC      | 111        |   |
|             |            | DS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL   |
|             |            |   |
| No          | ot appl    | icable - in reclamation.  |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
| - 101       | D 144 TC   | 20410   |
|             | D MATE     |   |
| DESCRIB     | E ME I HOL | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)                 |
| No          | one        |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            | ATION (GIVE ALL DIMENSIONS IN FEET)   |
| DESCRIB     | E LOCATIO  | ON AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
| N           | ot app]    | licable - in reclamation.   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
|             |            |   |
| YES         | NO         |   |
| _           | _          |   |
|             | <b>⊠</b>   | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?                  |
|             | □ <b>X</b> | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any |
|             | <b>م</b>   | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may     |
|             |            | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|             |            | or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is    |
|             |            | greater, unless a variance is granted by the Commission.)   |
| <del></del> | (CER       |   |
|             | X          | Will any excavation start at or within fifty feet (50') of any property line?                                 |
|             |            | (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

PAGE 2 OF 5

|   | •                           | 4 (. <b> ).</b>                         | dwart                     |
|---|-----------------------------|---|---------------------------|
| GERDING                                 | $\cup$                      | Und.                                    | 118/92                    |
| RECLAMATION PLAN - 10 CSR 40            | -10.020(2)(D)2.             |   |                           |
| A. REVEGETATION (Attach addit           |                             |   |                           |
| EVEGETATION MIX #1                      | PURPOSE OR LAND USE         | B. SEEDING OR PL                        |                           |
| Mixture #1                              | Wildlife                    | Fall or                                 | Spring                    |
| DESCRIBE METHODS AND EQUIPMENT TO       |                             |   | e 11                      |
| The seed mix will be d                  | rilled in using a reg       | ular or no - till drill. A              | iour-wheeler will         |
| spread seed on areas n                  | ot accessible by farm       | tractor due to trees or bru             | sh.                       |
|   |                             |   |                           |
|   |                             |   |                           |
|   |                             |   |                           |
|   |                             |   |                           |
|   |                             |   |                           |
|   |                             |   |                           |
| ime and fertilizer will be applied a    | ccording to recommendations | s made, based on an analysis of soil te | xture and nutrients. Mulo |
| vill be applied to all slopes exceeding | ng 5:1.                     |   |                           |
| SEEDED SPECIES                          | POUNDS/ACRE                 | TREE OR SHRUB SPECIES                   | STEMS/ACRE                |
| Tall Fescue                             | 20                          |   |                           |
|   | -0                          |   |                           |
| Serecea Lespedeza                       | 20                          |   | į                         |
| Serecea Lespedeza Wheat or Oats         |                             |   |                           |
| -                                       | 20                          |   |                           |
| <u>-</u>                                | 20                          |   |                           |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

PURPOSE OR LAND USE

| SEEDED SPECIES | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------|-------------|-----------------------|------------|
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       |            |
|                |             |                       | _          |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

REVEGETATION MIX #2

B. SEEDING OR PLANTING TIME

| RECLAMATION PLAN - 10 CSR 4 | 10-10.020(2)(D)2.           |                             |
|-----------------------------|-----------------------------|-----------------------------|
| A. REVEGETATION (Attach add | ditional sheets, if needed) |                             |
| REVEGETATION MIX #1         | PURPOSE OR LAND USE         | B. SEEDING OR PLANTING TIME |
| Mixture #1                  | Pasture                     | Fall or Spring              |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulc will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 0.5                 |                       |            |
| iall rescue         | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     | I                     |            |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLAI    | NTING TIME |
| Mixture #2          | Pasture             | Fall or Spi           | ring       |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                   | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------------------------|-------------|-----------------------|------------|
| Orchard Grass                    | 10          |                       |            |
|                                  | 10          |                       |            |
| Korean Lespedeza                 | 6           |                       |            |
| Wheat or oats                    | 30          |                       |            |
| Use serecea lespedeza on slopes. | 20          |                       |            |
|                                  |             |                       |            |
|                                  |             |                       |            |
|                                  |             |                       |            |

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES A lake was created by each of the mined out pits. All slopes on all the pit and spoil areas are traversable except the south slope of Gerding #8. This slope was left a 2:1 because of the private road along the edge of the pit. If vegitation cannot be established on this slope further grading will be required.

Love to be wildlife based on the role on the riginal

8/28/92 copy, C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES GRADING Done REPLACEMENT OF TOPSOIL Done REVEGETATION We will seed the areas with inadequate vegitation each year until a suitable stand is achieved. AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES) 12 inches D. USE OF LAND WHEN RECLAIMED **ESTIMATED ACRES:** Estimate acreage of each land use below, after reclamation Wildlife (forest or other habitat with livestock excluded) Agricultural (pasture, cropiand, and horticultural) O

Development (residential, industrial, and recreational)

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- 180°C

Water impoundments (for wildlife, agricultural, or development)

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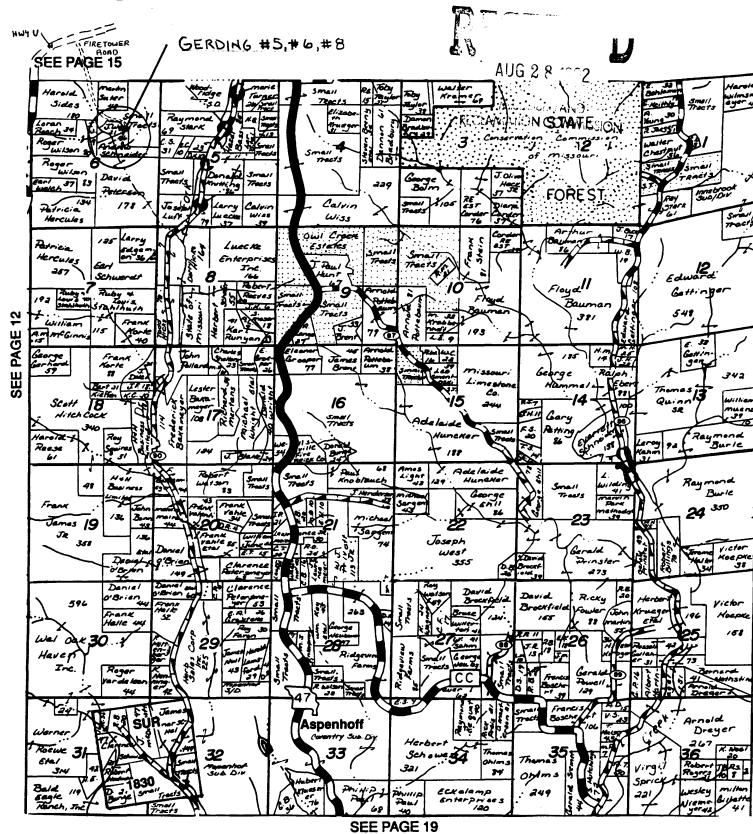
5

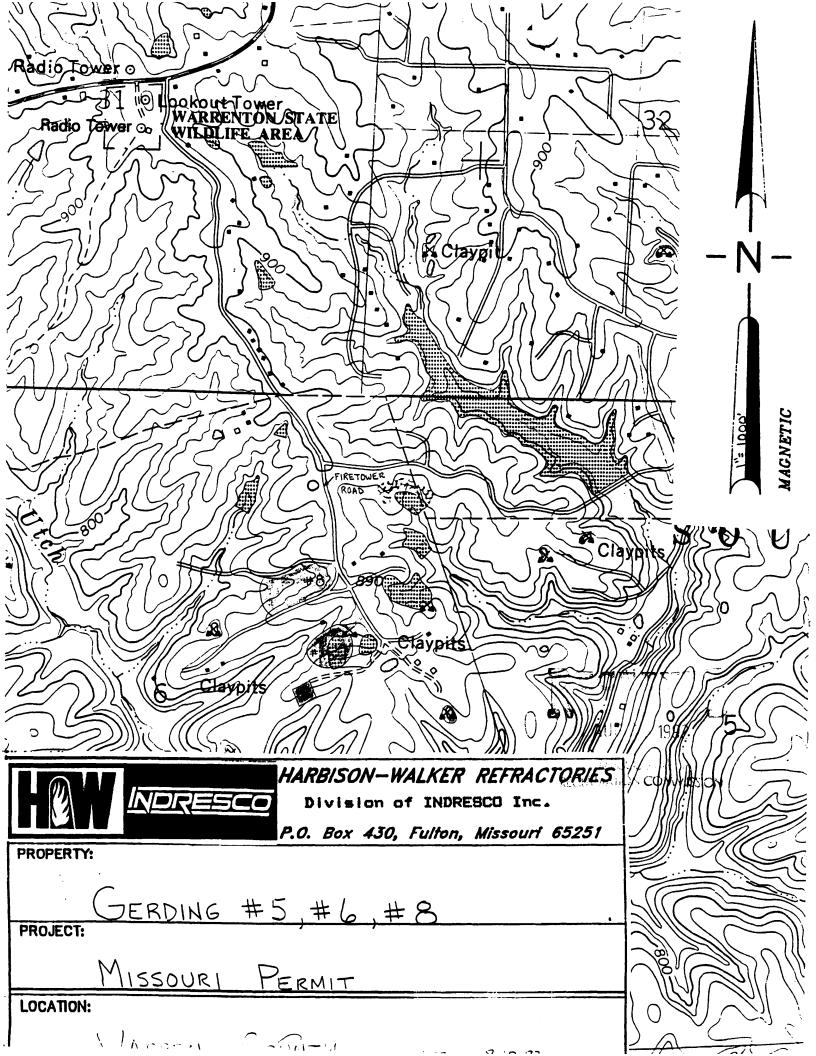
### By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT      |   | TITLE                         | DATE                 |                        |
|-----------------------------|---|-------------------------------|----------------------|------------------------|
| Jeffrey P. Jahn             | Aff. IL   | Manager-<br>Mining & Explos   | ration 8             | 1,7/92                 |
| NOTARY PUBLIC EMBOSSER SEAL | Pennsylvania SUBSCRIBED AND SWORN BEFORE ME. TI |                               | COUNTY (OR CITY OF & |                        |
|                             | 10 4  | igust, 19 92                  | USE RUBBER STA       | MP IN CLEAR AREA BELOY |
|                             | MOTARY PUBLIC SIGNATURE Lovetta M. Lottschling  | MY COMMISSION EXPIRES 3-20-95 | Lersing              |                        |
|                             | Lovetta M. Lota                                 | Schling                       | करियति सन्           | n c                    |
| APPROVED BY (DIRECTOR'S RE  | PRESENTATIVE)                                   | DATE APPROVED                 | PERM                 | IIT NUMBER             |

## Township 46 Range 2W







### MISSOURI DEPARTMENT OF NA RAL RESOURCES LAND RECLAMATION COMMISSION SITE INFORMATION FORM



| SITE NAME OR NUMBER                  |                    | PERMIT NUMBER          |                   |
|--------------------------------------|--------------------|------------------------|-------------------|
| Hanke #1, #11, #13                   |                    | 146                    |                   |
| COMPANY NAME                         |                    |                        |                   |
| Harbison-Walker Refract              | ories, Division of | INDRESCO, Inc.         |                   |
| COUNTY                               | 1/4 SECTION        |                        | SECTION           |
| Warren                               | Northwest (        | Quarter                | 7                 |
| TOWNSHIP                             | RANGE              |                        | ACRES             |
| 46 North                             | 2 West             |                        | 10                |
| RIVER OR STREAM NAME (FOR IN-STREAM  | ACRES)             |                        |                   |
|                                      |                    |                        |                   |
| MINERAL COMMODITY                    |                    | ESTIMATED TONS/YEAR (I | FOR GRAVEL SITES) |
| Clay                                 |                    |                        |                   |
|                                      |                    |                        |                   |
| NAME OF LANDOWNER (ATTACH LIST IF MO | DRE THAN ONE)      |                        |                   |
| Orville Thoroughman et.              | al.                |                        |                   |
| ADDRESS                              |                    |                        |                   |
| 8867 ORF Rd.                         |                    |                        |                   |
| CITY                                 |                    | STATE                  | ZIP CODE          |
| O'Fallon                             |                    | Missouri               | 63366             |
| SOURCE OF RIGHT TO MINE (CHECK ONE): |                    |                        | DATE OF AGREEMENT |
| MINERAL DEED                         |                    | LEASE                  |                   |
| WARRANTY DEED                        |                    | VERBAL AGREEMENT       |                   |
| OTHER (DESCRIBE):                    |                    |                        |                   |
|                                      |                    |                        |                   |
|                                      |                    |                        |                   |
| MINERAL RIGHTS OWNER (ATTACH LIST IF | MORE THAN ONE)     | <u>-</u>               |                   |
| Harbison-Walker Refract              |                    | INDRESCO, Inc.         |                   |
| ADDRESS                              |                    |                        |                   |
| 1301 Westminster Ave.,               | P.O. Box 430       |                        |                   |
| CITY                                 |                    | STATE                  | ZIP CODE          |
| Fulton                               |                    | Missouri               | 65251             |
| SOURCE OF RIGHT TO MINE (CHECK ONE): |                    |                        | DATE OF AGREEMENT |
| MINERAL DEED                         |                    | LEASE                  | December 10, 1910 |
| WARRANTY DEED                        |                    | VERBAL AGREEMENT       |                   |
| _                                    |                    | VENDAL AGILLIMENT      |                   |
| OTHER (DESCRIBE):                    |                    |                        |                   |



P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):   |   |  |  |  |  |  |  |
|---|---|--|--|--|--|--|--|
| SHORT TERM, FOR ONE PERMIT YEAR   |   |  |  |  |  |  |  |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2002  |   |  |  |  |  |  |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OF AND TOPOGRAPHY.  | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION |  |  |  |  |  |  |
| HANKE #1, #11, #13  | •   |  |  |  |  |  |  |
| This plan covers three clay pits covering a total of 10 acres. All three pits lie on the ridgetop in an area used primarily for pasture. The areas around the pits are relatively flat to gently sloping. |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
| DPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |  |  |  |  |  |  |
| A. TOPSOIL  |   |  |  |  |  |  |  |
| VERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |  |  |  |  |  |  |
| 12 INCHES   | YES OR NO                                   |  |  |  |  |  |  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   |   |  |  |  |  |  |  |
| Topsoil will be removed using rubber-tired scrapers and bu<br>be stored near the pit within the permit area. We will re<br>topsoil from all areas to be disturbed before mining or st                     | move 6 to 12 inches of                      |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |
| ESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |   |  |  |  |  |  |  |
| Topsoil will be stored in gently sloping piles and will be if necessary, to control erosion.  | seeded with annual grasses,                 |  |  |  |  |  |  |
|   |   |  |  |  |  |  |  |

| B. SPC                    | )IL  |   |
|---------------------------|--|---|
|                           |  | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| #13<br>Afte<br>pit        | is comer the material in the m | pit #13 will be stored temporarily around the clay pit. Once mining of pit pleted, the spoil from pit #13 and #11 will be stored permenently in pit #11. mining of pit #11 is completed spoil from pit #1 will be backfilled into til original topography has been restored. Any excess spoil from pit #1 ed to construct a dam to form a water impoundment.  |
|                           |  |   |
| C. ACI<br>DESCRIB<br>None | E METHOD   | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
|                           |  |   |
|                           |  |   |
| ·                         |  |   |
|                           |  |   |
|                           |  |   |
| PIT                       | INFORM   | ATION (GIVE ALL DIMENSIONS IN FEET)   |
|                           |  | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
| area                      | to the   | roughly circular in plan view and is located in the center of the 6 acre permit west. Pits #11 and #13 are roughly circular and are in close proximity her in the center of the 4 acre permit area to the east.   |
|                           |  |   |
| ı                         |  |   |
| YES                       | NO   |   |
|                           | X  | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                           | <b>□</b>   | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|                           | [3]  | Will any excavation start at or within fifty feet (50') of any property line?  (NOTE: If the answer is "yes", a safety barrier may be needed.)  |

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|  |  |  |  |  |  |  |  |  |  |  |  |  | (D |  |
|--|--|--|--|--|--|--|--|--|--|--|--|--|----|--|

| . REVEGETATION (Attach additional sheets, if needed) |                             |  |  |  |  |  |
|--|-----------------------------|--|--|--|--|--|
| Mixture #1   | PURPOSE OR LAND USE Pasture | B. SEEDING OR PLANTING TIME Fall or Spring |  |  |  |  |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                             |   | POUNDS/ACRE                    | TREE OR SHRUB | SPECIES                      | STEMS/ACRE |
|--|---|--------------------------------|---------------|------------------------------|------------|
| Tall Rescue<br>Red Clover<br>Wheat or oats | : | 25<br>5<br>30                  |               |                              |            |
| VEGETATION MIX #2<br>Mixture #2            |   | PURPOSE OR LAND USE<br>Pasture |               | B. SEEDING OR PLA<br>Fall or |            |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES        | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|-----------------------|-------------|-----------------------|------------|
| Orchard Grass         | 10          |                       |            |
| Korean Lespedeza      | 6           |                       |            |
| Wheat or oats         | 30          |                       |            |
| Use serecea lespedeza | }           |                       |            |
| on slopes             | 20          |                       |            |
|                       |             |                       |            |
|                       | · <b>[</b>  |                       |            |
|                       |             |                       | 1          |
|                       |             |                       |            |
|                       |             |                       |            |
|                       |             |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

### B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Pits 11 and 13 will be backfilled with spoil derived from these pits and pit 1. The backfill will be graded to the approximate pre-Mining topography. Pit #1 will be made into a 2 acre impoundment with traversable slopes on the banks and on the dam.

### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances and as spoil is either backfilled or put into a dam. Final grading of all disturbed areas will be completed within one year after mining.

### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber-tired scrapers and bulldozers within one year after grading is complete.

REVEGETATION

The sites will be seeded in the fall or spring after topsoil replacement.

### AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12 inches

| 12 Inches   |                  |
|---|------------------|
| D. USE OF LAND WHEN RECLAIMED                                   | ESTIMATED ACRES: |
| Estimate acreage of each land use below, after reclamation      |                  |
| Wildlife (forest or other habitat with livestock excluded)      |                  |
| Agricultural (pasture, cropland, and horticultural)             | 8                |
|   | 0                |
| Development (residential, industrial, and recreational)         |                  |
| Water impoundments (for wildlife, agricultural, or development) | 2                |
|   | 1                |

By my signature, I attest to the following:

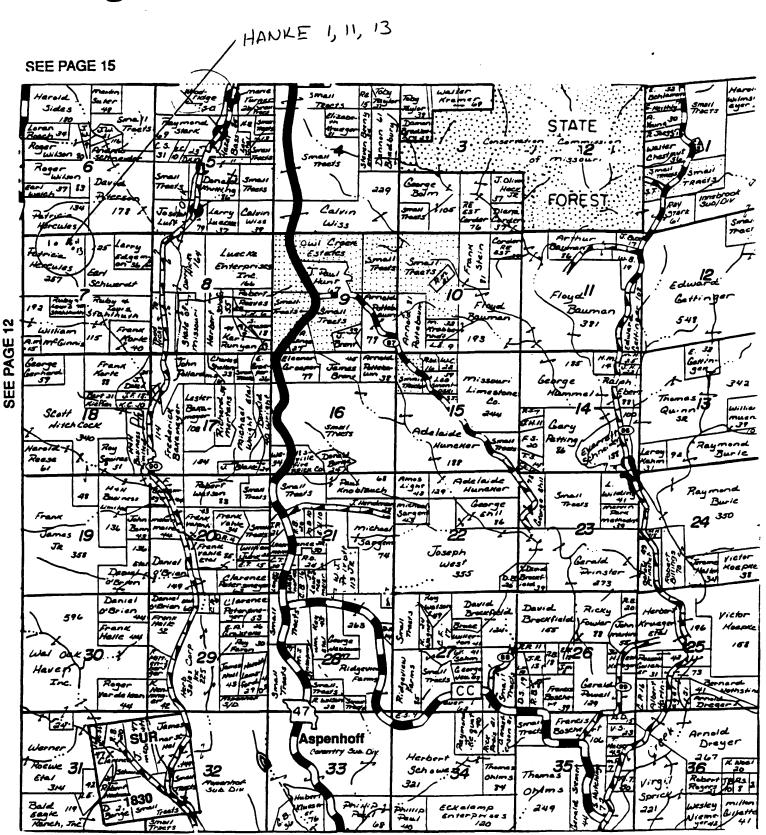
MO 780-1327 (12-91)

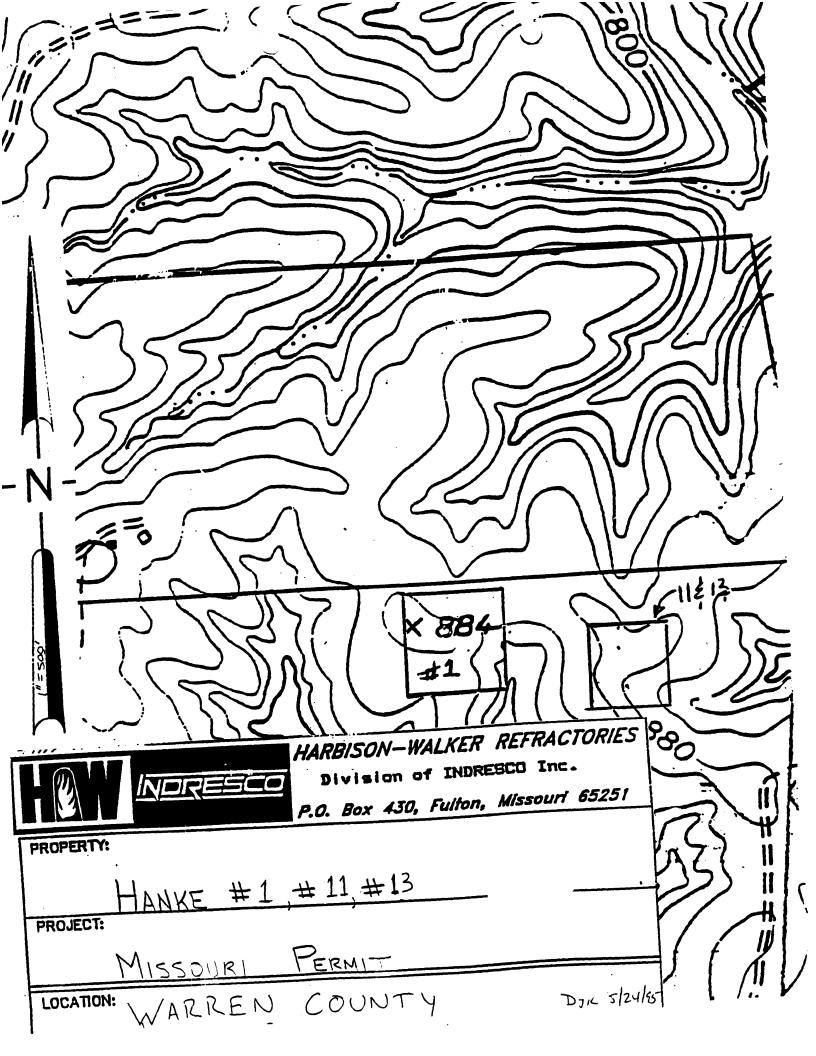
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

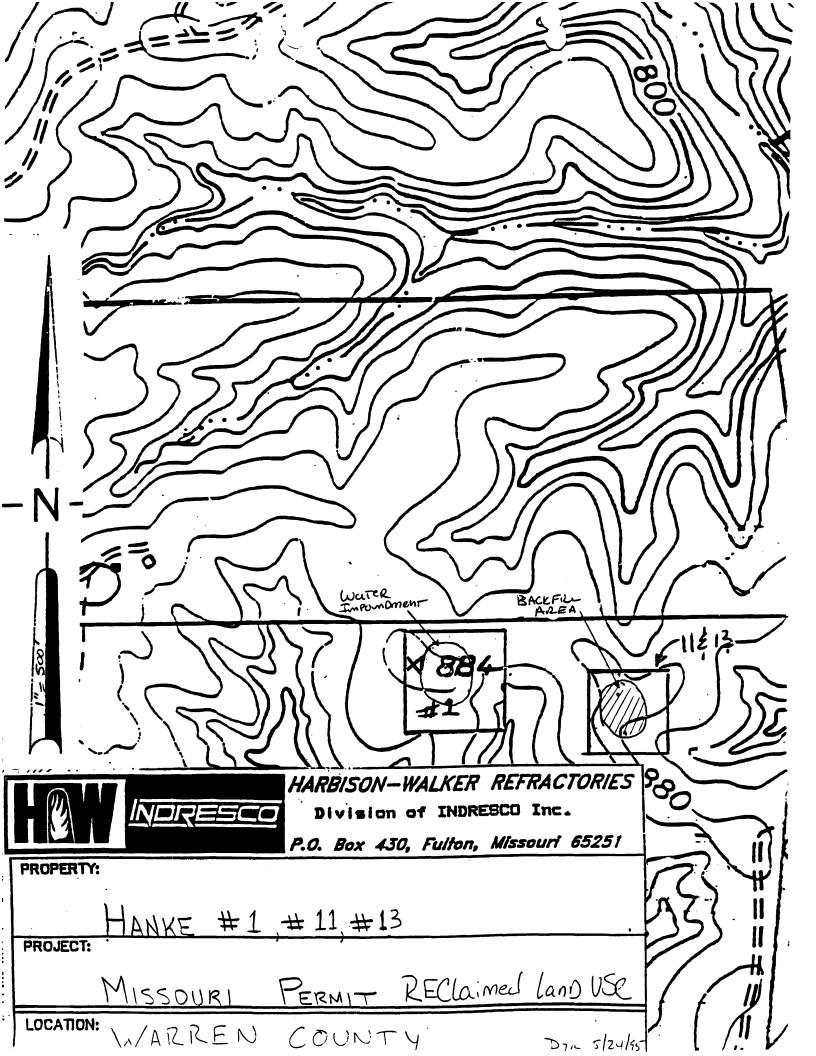
| SIGNATURE OF APPLICANT William K. Br | ow William K. Brown  | TITLE Manager- Mi Minerals Oper | _                     | 5-30-95  |
|--------------------------------------|--|---------------------------------|-----------------------|--|
| NOTARY PUBLIC EMBOSSER SEAL          | STATE Pennsylvania  SUBSCRIBED AND EWORN BEFORE ME, TH  30 th DAY OF MA  NOTARY PUBLIC SIGNATURE |                                 | ASE HORRE             | R STAMP IN CLEAR AREZ BELOV<br>Gottschling, Notary Public                            |
|                                      | Loretta M. Bottschling<br>NOTARY PUBLIC NAME (TYPED OR PRINTED)<br>Loretta M. Gottsc             | EXPIRES 3/20/99                 | Pittsbu<br>My Commiss | urgh, Allegheny County sion Expires March 20, 1999 nsylvania Association of Notaries |
| APPROVEL 3Y (DIRECTOR'S REPR         |  | DATE APPROVED                   |                       | PERMIT NUMBER  |

PAGE 5 O

## Township 45 Range 2W

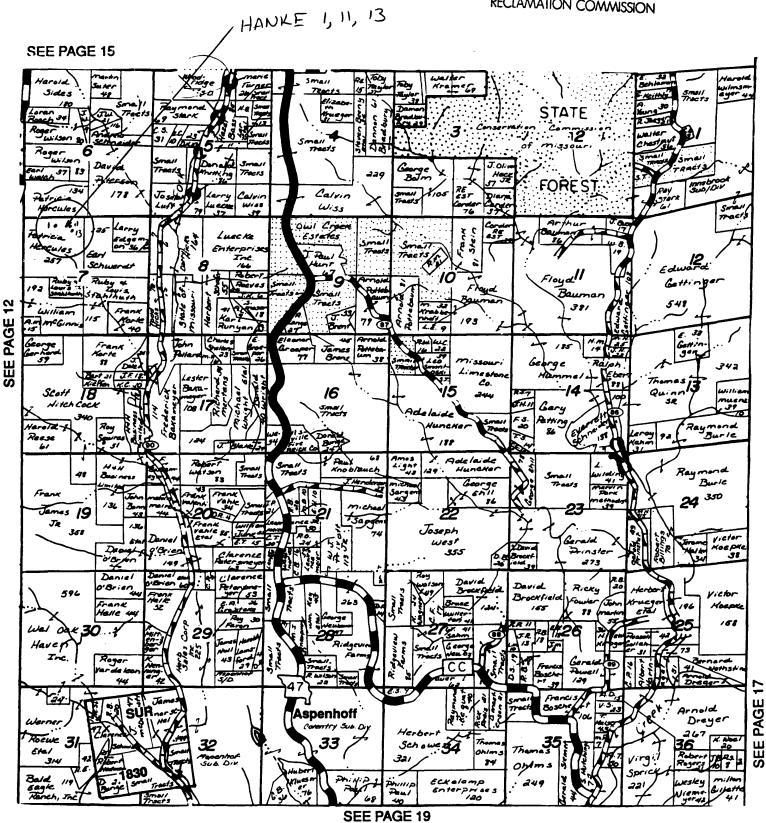


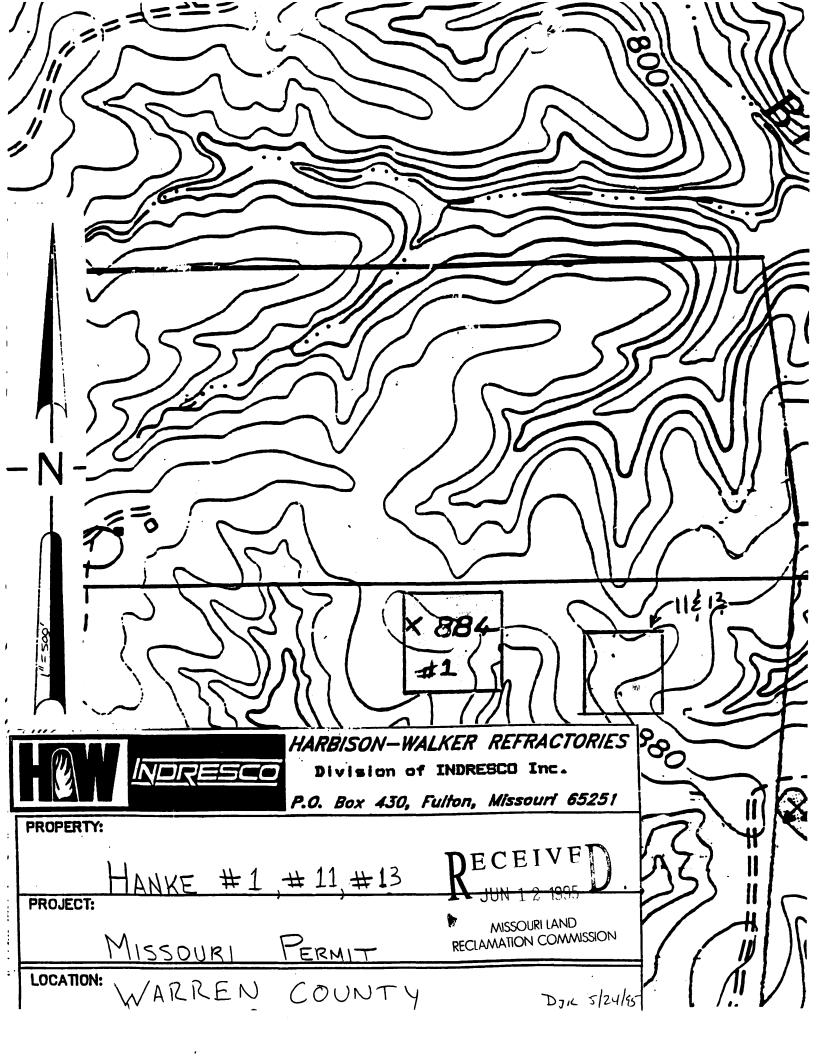


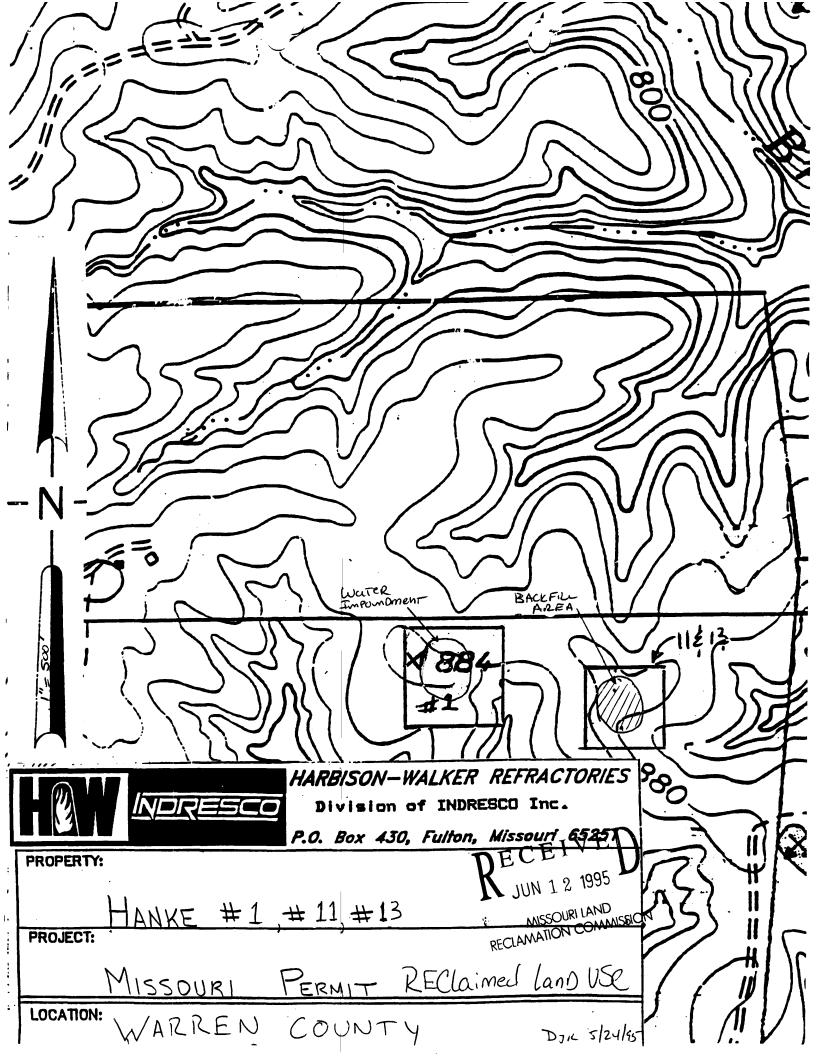


# Township 46 Range 2W









### MISSOURI DEPARTMENT - NATURAL RESOURCES LAND RECLAMATION COMMISSION

LAND RECLAMATION COMMISSION SITE INFORMATION FORM

MO 780-1036 (12-91)

JAN 1 / 2000 P.O. BOX 176

MISSOURI LABORETERSON CITY, MO 65102

| SHE INFORMATION FORM  | RECLAMATION: C                   | CMAMISSION                             |
|---|----------------------------------|--|
| SITE NAME OR NUMBER   | KECTM MIGHICS                    | PERMIT NUMBER                          |
| Hensley #6  |                                  | 146                                    |
| COMPANY NAME  |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                                |
| Gasconade   | NE 1/4                           | 2                                      |
| TOWNSHIP  | RANGE                            | ACRES                                  |
| 41 N  | 6 W                              | 3                                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                  | •                                      |
|   |                                  |  |
| MINERAL COMMODITY   |                                  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                  |  |
|   |                                  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                  |  |
| Mr. Donnie Zeilmann   |                                  |  |
| ADDRESS   |                                  |  |
| 3626 Holzschuh Road   |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Bland   | МО                               | 65014                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                  | DATE OF AGREEMENT                      |
|   |                                  |  |
| MINERAL DEED  | LEASE                            |  |
| WARRANTY DEED   | VERBAL AGREEM                    | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
|   |                                  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| ADDRESS   |                                  |  |
| P.O. Box 430  |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Fulton  | Missouri                         | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK UNE):                              |                                  | DATE OF AGREEMENT                      |
| W   |                                  |  |
| X MINERAL DEED  | LEASE                            | 05/31/86                               |
| WARRANTY DEED   | VERBAL AGREEM                    | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
| NOTE: Each site must be sown on a man and be included in a public | notice and an approved mine plan |  |

### MISSOURI DEPARTMENT OF NATIONAL RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



|  |  | 2000  |
|--|--|---|
| TYPE OF PLAN (CHECK ONE):  |  | MISSOURI LAND   |
| SHORT TERM, FOR ONE PERMIT YEAR  |  | RECLAMATION COMMISSION  |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | <u>12/31/2050</u>  |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | G (BY APPLICANT OR PRIOR OPERAT  | OR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY   |
| The soil is rocky loam, vegetation consists  | of standing timber with t  | ypical underbrush. Slopes are very gentle.  |
|  |  |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |  |   |
|  |  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM  | IMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
|  | 2 INCHES   | YES X NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVA   | AL   |   |
| Prior to topsoil removal and immediately fo control measures will be installed including basins in any combination depending on sit scrapers and/or bulldozers. The topsoil will surficial material from all areas to be disturb | straw bale dikes, silt fer<br>e specific conditions. T<br>be stored near the pit v | nces, rock check dams or sediment opsoil will be removed using rubber-tired within the permitted pit area. We will remove the |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE  | GE AND PROTECTION  |   |
| Surficial material will be stored in gently slo<br>to control any erosion .  | pping piles and will be se   | eeded if necessary with a cover crop  |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |
|  |  |   |

| DESCRIBE METHO      | DDS AND LOCA  | TION OF SPOIL PLACEMENT AND DISPOSAL  |
|---------------------|---------------|---|
| to the              |               | piled adjacent to the excavation and within the permit boundary to form a dam if the pit. After mining is completed the spoil will be graded into a dam or backfilled in the  |
|                     |               | DECEIVED  |
|                     |               | RECEIVE   |
|                     |               | RECEIVED  |
|                     |               | MISSOURILAND  |
|                     |               | RECLAMATION COMMISSION  |
| C. ACID MA          | TERIALS       |   |
| DESCRIBE METHO      | ODS AND EQUIF | PMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| None                |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
| PIT INFORM          | AATION (G     | IVE ALL DIMENSIONS IN FEET)   |
| DESCRIBE LOCA       | TION AND ORIE | NTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
|                     |               |   |
| (See s              | site maps)    |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
|                     |               |   |
| YES                 | NO            |   |
| X                   |               | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                     |               |   |
|                     |               |   |
|                     | <u> </u>      | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may |
|                     |               | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|                     |               | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is  |
|                     |               | greater, unless a variance is granted by the Commission.)   |
|                     | X             | Will any excavation start at or within fifty feet (50') of any property line?   |
| l <u></u>           | لـــــا       | (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
|                     |               |   |
| MO 780-1327 (12-91) |               | Page ?  |

B. SPOIL

### RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.

### A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1

PURPOSE OR LAND USE

B. SEEDING OR PLANT TIME

Mixture #1

Development

Fall or Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

RECEIVED

MISSOURI LAND
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES   | POUNDS/ACRE        | TREE OR SHRUB SPEC | CIE STEMS/ACRE             |  |  |
|---|--------------------|--------------------|----------------------------|--|--|
| Tall Fescue<br>Red Clover<br>Lespediza<br>Wheat or Oats | 25<br>5<br>5<br>30 |                    |                            |  |  |
| VEGETATION MIX #2                                       | PURPOSE            | E OR LAND USE      | B SEEDING OR PLANTING TIME |  |  |
| Mixture #2  | Developr           | nent               | Spring or Fall             |  |  |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                         | POUNDS/ACRE | TREE OR SHRUB SPECIE | STEMS/ACRE |
|---|-------------|----------------------|------------|
| Orchard Grass                           | 10          |                      |            |
| Timothy                                 | 10          |                      |            |
| Korean Lespedeza                        | 6           | !                    |            |
| Wheat or Oats                           | 30          |                      |            |
| Serecea Lespedeza<br>(On Slopes)        | 20          |                      |            |
| · • • • • • • • • • • • • • • • • • • • |             |                      |            |
|   |             |                      |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

### **B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

COMMISSION COMMISSION Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A n impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### **GRADING**

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into dams to create impoundments. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

#### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance whith MO 10CSR-40.10.050 (A)(10)(A).

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"  |                 |
|---|-----------------|
| D USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES |
| Wildlife (forest or other habitat with livestock excluded)                                | 0               |
| Agricultural (pasture, cropland, and horticultural)                                       | 2               |
| Development (residential, industrial, and recreational)                                   | 0               |
| Water impoundments (for wildlife, agricultural, or development)                           | 1               |

MO 780-1327 (12**-9**1)

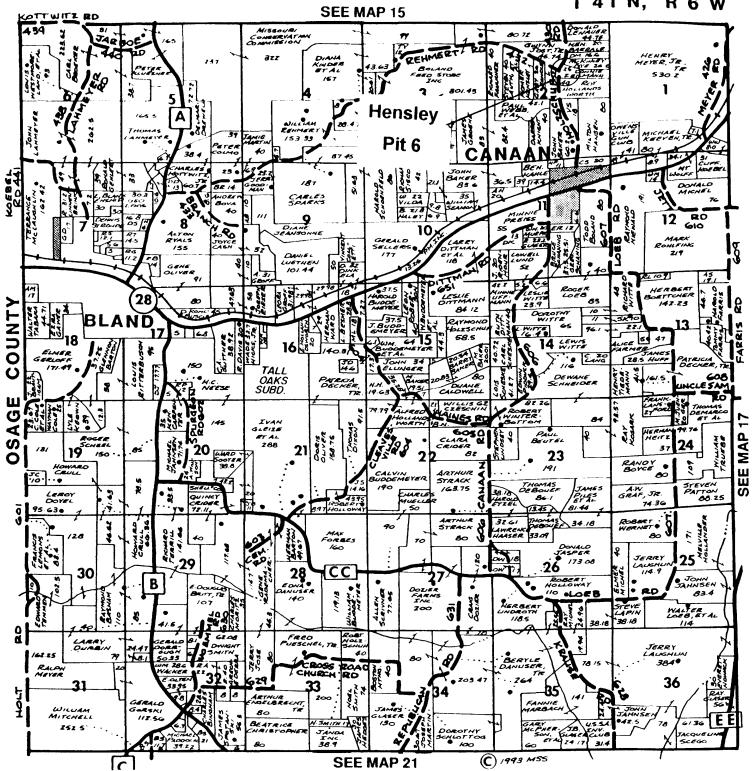


By my signature, I attest to the following:

| MISSOURI LAND RECLAMATION COMMISSION |
|--------------------------------------|
|--------------------------------------|

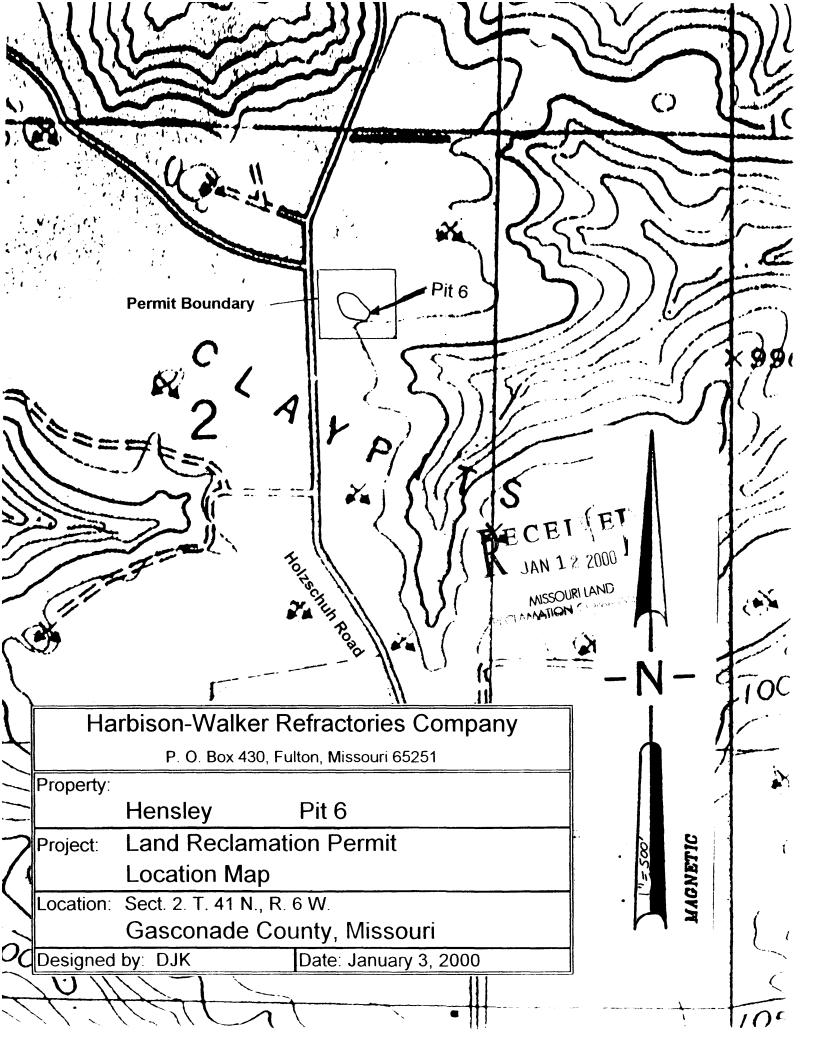
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

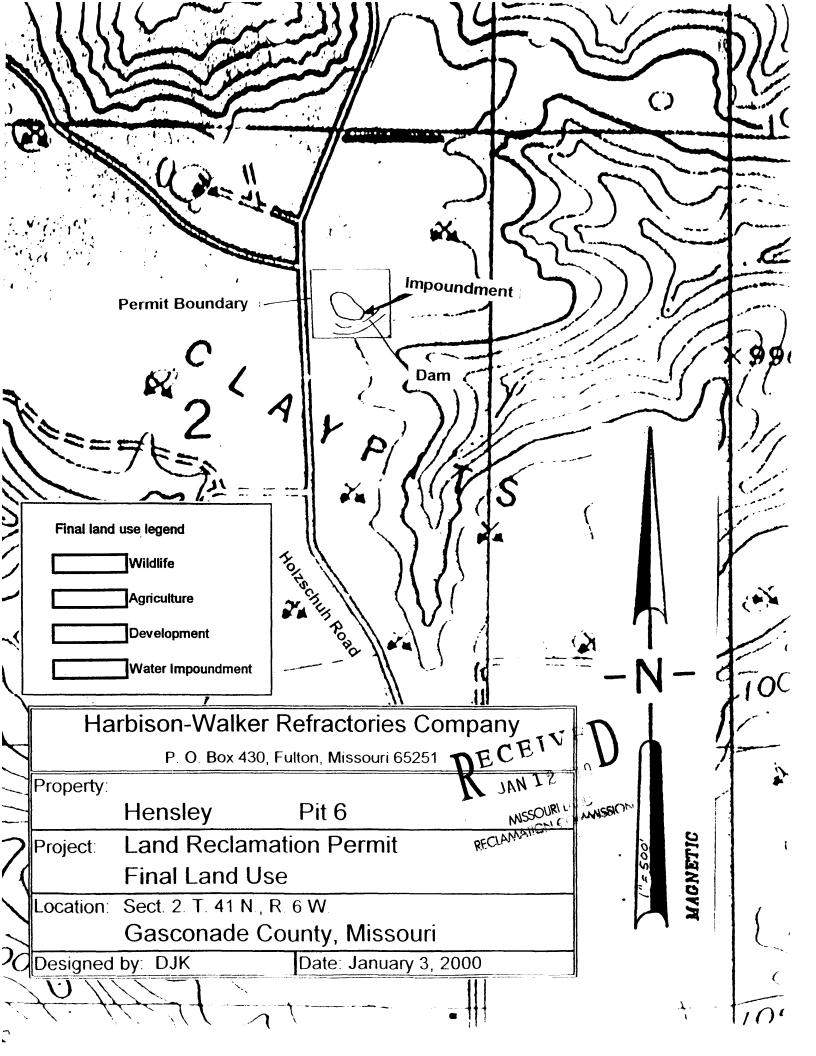
| SIGNATURE OF APPLICANT                  | TITLE   | Mine sugar    | u'sac_                               |
|---|---|---------------|--------------------------------------|
| NOTARY PUBLIC EMBOSSER SEAL             | Musour  |               | COUNTY (OR CITY OF ST. LOUIS)        |
|   | SUBSCRIBED AND SWORN BEFORE ME, THIS  // DAY OF January | 1.7           | USE RUBBER STAMP IN CLEAR AREA BELOW |
|   | NOTARY PUBLIC SIGNATURE  Kalen & Lucher                 | 7-18-03 STAT  |                                      |
|   | NOTARY PUBLIC NAME (TYPED OR PRINTED)  Karen S Luther   | MY COMMIS     | AWAY COUNTY EXPIRES JULY 18, 2003    |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED   | PERMIT NUMBER |                                      |



ECEIVE JAN 1 2 2000 MISSOURI LAND

RECLAMATION COMMISSION

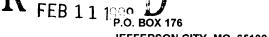




### MISSOURI DEPARTMENT CONATURAL RESOURCE

LAND RECLAMATION COMMISSION

### **SITE INFORMATION FORM**



MISSOURI LANDEFFERSON CITY, MO 65102

|  | RECLAMATION COMP  | RMITNUMBER                                  |  |
|--|-------------------|---|--|
| Joseph Polston Property  |                   | 146   |  |
| OMPANY NAME  |                   |   |  |
| Harbison-Walker Refractories Comp  | pany              |   |  |
| COUNTY   | 1/4 SECTION       | SECTION                                     |  |
| Warren   | SW 1/4            | 7   |  |
| OWNSHIP  | RANGE             | ACRES                                       |  |
| 47 North   | 2 West            | 9   |  |
| IVER OR STREAM NAME (FOR IN-STREAM ACRES)  |                   |   |  |
|  |                   |   |  |
| MINERAL COMMODITY  | EST               | TIMATED TONS/YEAR (FOR GRAVEL SITES)        |  |
| Fire Clay  |                   |   |  |
|  |                   |   |  |
| IAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)   |                   |   |  |
| William McGinnis   |                   |   |  |
| ADDRESS  |                   |   |  |
| 24 Portland Drive  |                   |   |  |
| ary  | STATE             | ZIP CODE                                    |  |
| St. Louis  | Missouri          | 63131                                       |  |
| COURCE OF RIGHT TO MINE (CHECK ONE):   | IIIIGGGII         | DATE OF AGREEMENT                           |  |
| (6,26,00)  |                   |   |  |
| MINERAL DEED   | LEASE             |   |  |
| WARRANTY DEED  | VERBAL AGREEMENT  | •   |  |
|  |                   |   |  |
| OTHER (DESCRIBE):  |                   |   |  |
| OTHER (DESCRIBE):  |                   |   |  |
| OTHER (DESCRIBE):  |                   |   |  |
|  |                   |   |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  | pany              | -   |  |
| OTHER (DESCRIBE):  MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Companders  | pany              |   |  |
| mineral rights owner (attach list if more than one)  Harbison-Walker Refractories Comp   | pany              |   |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Comp   | Dany STATE        | ZIP CODE                                    |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Harbison-Walker Refractories Comp<br>ADDRESS P.O. Box 430  |                   | ZIP CODE<br>65251                           |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Companderss  P.O. Box 430  CITY  Fulton  | STATE             |   |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Companderss  P.O. Box 430  CITY  Fulton  SOURCE OF RIGHT TO MINE (CHECK ONE):  | STATE<br>Missouri | 65251  DATE OF AGREEMENT                    |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Companderss  P.O. Box 430  Harbison-Walker Refractories Companders Compa | STATE             | 65251  DATE OF AGREEMENT                    |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)  Harbison-Walker Refractories Companders  P.O. Box 430  CITY  Fulton  SOURCE OF RIGHT TO MINE (CHECK ONE):   | STATE<br>Missouri | 65251  DATE OF AGREEMENT  September 10,1910 |  |

### MISSOURI DEPARTMENT OF NATURARESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



| TYPE OF PLAN (CHECK ONE):   |  | MISSOURI LAND RECLAMATION COMMISSION        |
|---|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR   |  | RECLAMATION                                 |
| X LONG TERM, FOR PERIOD THROUGH DATE:   | 03/01/2008                                     |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTIN  | IG (BY APPLICANT OR PRIOR OPERATOR), INCLUDING | SOIL, VEGETATION, AND TOPOGRAPHY            |
| The site is currently in brush and timber antopography is relatively flat. Topsoil in the   |  | t occurrs along the ridge line where the    |
|   |  |   |
|   |  |   |
|   |  |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   | ······   |   |
|   |  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM   | MMISSION PERMITTING                            | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 12  | ! INCHES                                       | YES X NO                                    |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOV   | 'AL  |   |
| Topsoil will be removed using rubber-tired near the pit within the permit area. We will disturbed before mining or stripping begins | remove the 12 inches of surficial              |   |
|   |  |   |
|   |  |   |
|   |  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE   | GE AND PROTECTION                              |   |
| Surficial material will be stored in gently slot to control any erosion.  | oping piles and will be seeded with            | annual grasses, if necessary,               |
|   |  |   |

| DESCRIBE METHODS AND LOC | ATION OF SPOIL PLACEMENT AND DISPOSAL  |
|--------------------------|--|
| Spoil will be ren        | noved using bull-dozers and rubber tired scrapers. Spoil will be backfilled as mining progresses.  |
|                          | DECEIVED   |
|                          | RECEIVED FEB 1 1 1998  |
|                          | MISSOURI LAND  |
|                          | RECLAMATION COMMISSION   |
| C. ACID MATERIALS        |  |
| DESCRIBE METHODS AND EQU | IIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)  |
| None                     |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
| DIT INFORMATION (        | DIVE ALL DIMENSIONS IN EEET  |
|                          | ENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
| BESCRIBE ESCAPION AND ON | ENTATION OF THE WAS CONTRACTED BY A CONTRACT OF THE CONTRACT O |
| The pits are loc         | ated along the center line of the ridge and are irreglularly shaped in plan view.  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
|                          |  |
| YES NO                   |  |
| X                        | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |
|                          |  |
| X                        | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may  |
|                          | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet   |
|                          | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)   |
| X                        | Will any excavation start at or within fifty feet (50') of any property line?  |
|                          | (NOTE: If the answer is "yes", a safety barrier may be needed.)  |
|                          |  |
| MO 780-1327 (12-91)      | Page 2   |

B. SPOIL

| RECLAMATION PLAN 10 CSR 40-10.0 (2)(D)2. |                                    |                          |  |
|--|------------------------------------|--------------------------|--|
| A. REVEGETATION (Attach addit            | ional sheets, if needed)           |                          |  |
| REVEGETATION MIX #1                      | PURPOSE OR LAND USE                | B. SEEDING OR PLANT TIME |  |
| Mixture #1                               | Agriculture                        | Fall                     |  |
| DESCRIBE METHODS AND EQUIPMENT           | TO BE USED FOR SEEDING OR PLANTING |                          |  |

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.  $PECE_{IVE}$ 

RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------|-----------------------|------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |            |

 VEGETATION MIX #2
 PURPOSE OR LAND USE
 B. SEEDING OR PLANTING TIME

 Mixture #2
 Agriculture
 Spring

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

|                     | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|-----------------------|------------|
| 10<br>6<br>30<br>20 |                       |            |
| _                   | 6<br>30               | 6<br>30    |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

#### **B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

RECEIVED FEB 1 1 1998

MISSOURI LAND RECLAMATION COMMISSION

## C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

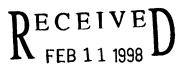
### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

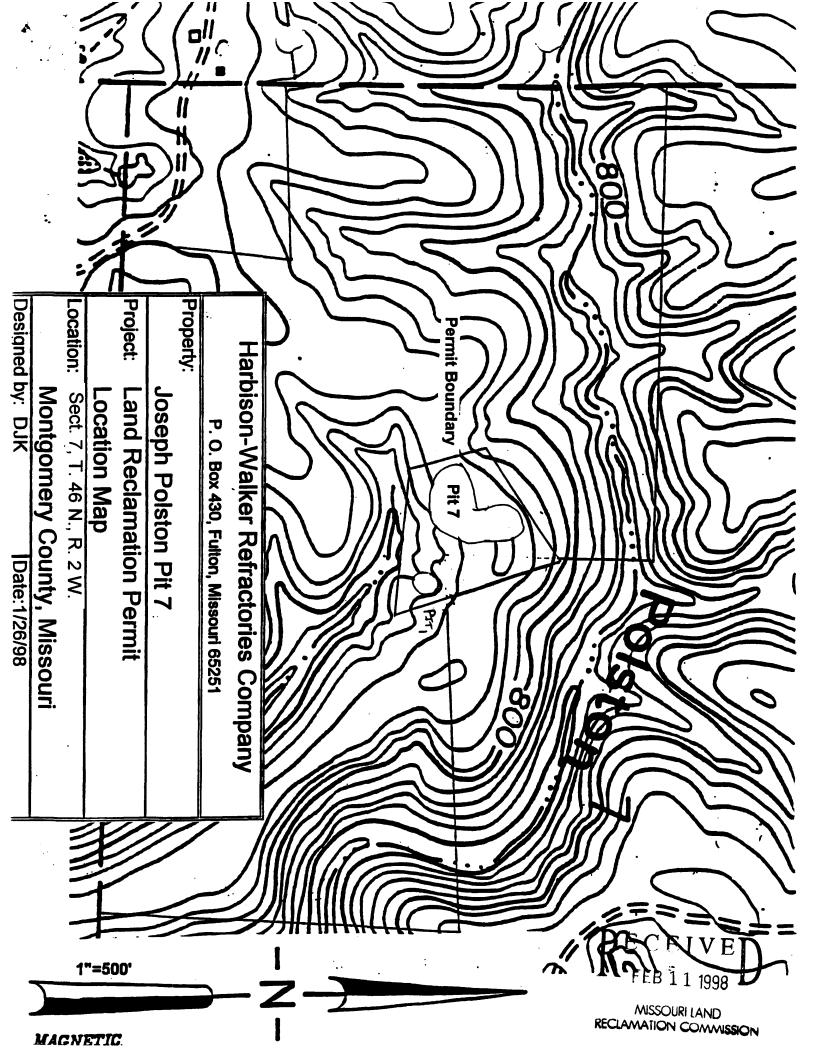
| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 8                |
| Development (residential, industrial, and recreational)                                    | 0                |
| Water impoundments (for wildlife, agricultural, or development)                            | 1                |

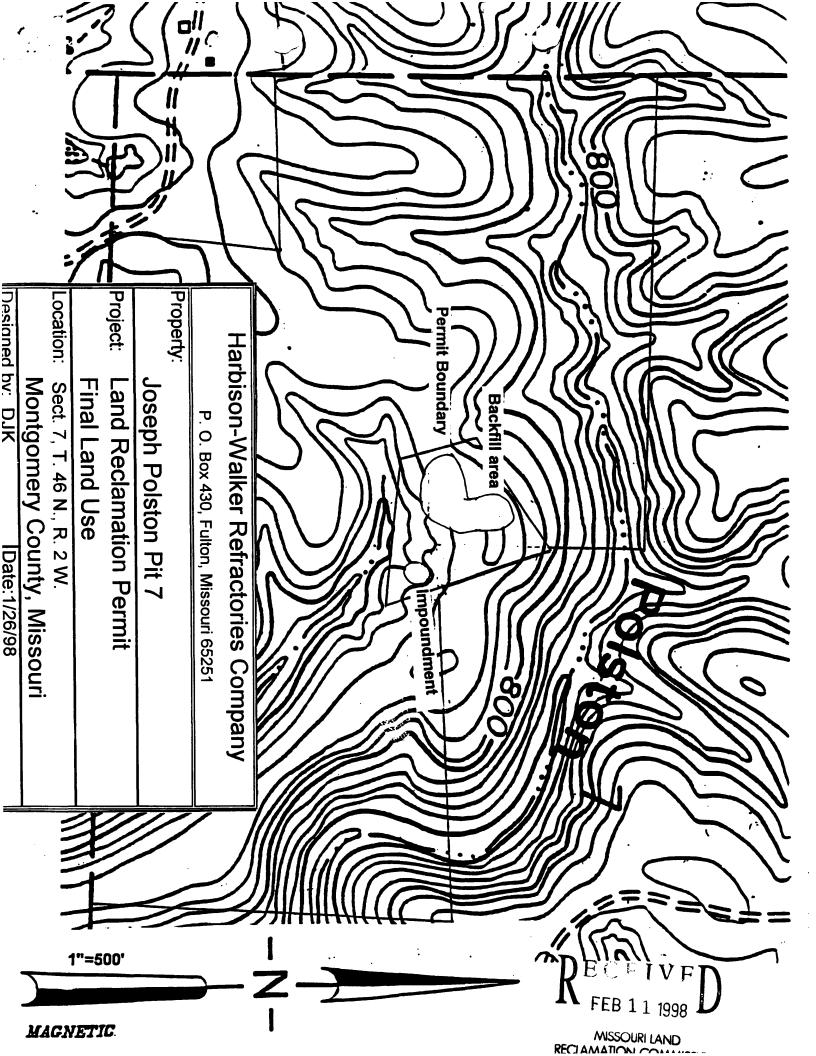
By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

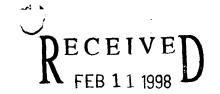


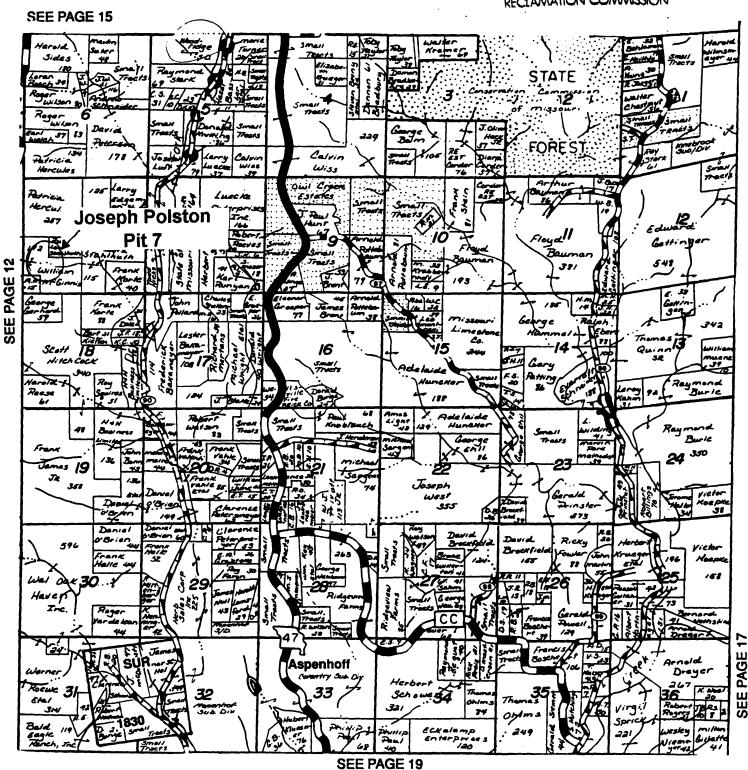
| SIGNATURE OF APPLICANT                  |                    | TITLE                      |                           |   |        |
|---|--------------------|----------------------------|---------------------------|---|--------|
| William K. B                            | rour _             | Vice -F                    | Pesident N                | inerals   |        |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE              | Wyanio                     |                           | COUNTY (OR CITY OF ST, LOUIS)  Allegnen 4   |        |
|   | SUBSCRIBED AND SW  | ORN BEFORE ME, THIS        | 19 98                     | USE RUBBER STAMP IN-<br>CLEAR AREA BELOW  |        |
|   | NOTARY PUBLIC SIGN | S. Tucks Expir             | DMMISSION  1ES  129 200 1 | Notarial Seal Kathleen S. Fuchs, Notaryl Pittsburgh, Allegheny Co. My Commission Expires Nov. | Public |
|   | NOTARY PUBLIC NAME | en S. F. C.                | :hs                       | My Commission Expires Nov.  Member, Pennsylvania Association                                  | of No  |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) |                    | DATE APPROVED  9 - J - 9 9 | PERMIT NUMBER             |   |        |
| MO 780-13 7 (12-91)                     |                    |                            |                           |   |        |





# Township \_6 Range 2W





## MISSOURI DEPARTMENT CONTROLL RESOURCE

LAND RECLAMATION COMMISSION

## SITE INFORMATION FORM

MISSOURI LAND JEFFERSON CITY, MO 65102

| SITE NAME OR NUMBER   | RECLAMATION COM                  | WENNIER WUMBER                         |
|---|----------------------------------|--|
| Juern Pit 1   |                                  | 146                                    |
| COMPANY NAME  |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                                |
| Warren  | SE                               | 20                                     |
| TOWNSHIP  | RANGE                            | ACRES                                  |
| 46 North  | 1 West                           | 4                                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                  |  |
|   |                                  |  |
| MINERAL COMMODITY   |                                  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                  |  |
|   |                                  |  |
|   |                                  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                  |  |
| Frank Stefanski   |                                  |  |
| ADDRESS   |                                  |  |
| 880 Pebble Lane   |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Florissant  | Missouri                         | 63033                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                  | DATE OF AGREEMENT                      |
| MINERAL DEED  | LEASE                            |  |
| WARRANTY DEED   | VERBAL AGREEME                   | NT                                     |
| OTHER (DESCRIBE):   | <del>_</del>                     |  |
|   | /                                |  |
|   |                                  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| ADDRESS   |                                  |  |
| P.O. Box 430  | \                                |  |
| СПУ   | STATE                            | ZIP CODE                               |
| Fulton  | Miccouri                         | 65251                                  |
|   | Missouri                         | DATE OF AGREEMENT                      |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                  |  |
| MINERAL DEED  | X LEASE                          | 4/29/1938                              |
| WARRANTY DEED   | VERBAL AGREEME                   | NT                                     |
| OTHER (DESCRIBE):   |                                  |  |
| NOTE. Each discussion and a land of the control of                | notice and an approved wine -1   |  |
| NOTE: Each site must be sown on a map and be included in a public | nouce and an approved mine plan. |  |

## MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION

MO 780-1327 (12-91)



Page 1

## PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

| <del></del>  |                                    | MISSOURI LAND                               |
|--|------------------------------------|---|
| TYPE OF PLAN (CHECK ONE):  |                                    | RECLAMATION COMMISSION                      |
| SHORT TERM, FOR ONE PERMIT YEAR  |                                    |   |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | <u>8/1/2009</u>                    |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | G (BY APPLICANT OR PRIOR OPERATOR) | INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY. |
| The site is currently in brush and timber and topography is well drained. Topsoil in the a   |                                    | . The pit is in a small draw where the      |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |                                    |   |
| CI EIVITON EAN - 10 OOK 40-10.020(2)(D)1.  |                                    |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMI   | MISSION PERMITTING                 | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 12   | INCHES                             | YES X NO                                    |
| Topsoil will be removed using rubber-tired s<br>near the pit within the permit area. We will<br>disturbed before mining or stripping begins. |                                    |   |
| Surficial material will be stored in gently slop to control any erosion.   |                                    | led with annual grasses, if necessary,      |
|  |                                    | ·   |
|  |                                    |   |

| B. SPOIL                    |  |
|-----------------------------|--|
| DESCRIBE METHODS AND LOCAT  | ON OF SPOIL PLACEMENT AND DISPOSAL   |
| Spoil will be remov         | ved using bull-dozers and rubber tired scrapers. Spoil will either be backfilled or used as fill for a da  |
|                             | DECE   |
|                             | RECEIVED AUG 0 5 1998  |
|                             | AUG 0 5 1998 <b>D</b>  |
|                             | MISSOURI LAND RECLAMATION COMMISSION   |
| C. ACID MATERIALS           |  |
| DESCRIBE METHODS AND EQUIPM | MENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| None                        |  |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
| PIT INFORMATION (GIV        | /E ALL DIMENSIONS IN FEET)   |
| DESCRIBE LOCATION AND ORIEN | TATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
| The pit is located i        | n a shallow draw and is elongate in plan view.   |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
|                             |  |
| YES NO                      |  |
| X                           | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |
| X                           | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and  |
|                             | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet |
|                             | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)   |
| X                           | Will any excavation start at or within fifty feet (50') of any property line?  |
|                             | (NOTE: If the answer is "yes", a safety barrier may be needed.)  |

| RECLAMATION PLAN - 10 CSR 40-10.02-(2)   | ANCOUR              |               |                          |  |
|--|---------------------|---------------|--------------------------|--|
| A. REVEGETATION (Attach additional sheet | s, if needed)       | RECLAMATION C | AND                      |  |
| REVEGETATION MIX #1                      | PURPOSE OR LAND USE |               | B. SEEDING OR PLANT TIME |  |
| Mixture #1                               | Development         |               | Fall                     |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE                |
|--|---------------|-----------------------|---------------------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |                           |
|  |               |                       |                           |
| VEGETATION MIX #2                          | Suppose       | OR LAND USE           | SEEDING OR DI ANTING TIME |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Development         | Spring                      |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

## B. GRADING

RECEIVED AUG 0 5 1998

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

MISSOURI LAND

Areas backfilled with spoil from the site will be graded to match the surround the

## C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas, natural depressions or put into a dam to create an impoundment. Final grading of disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 0                |
| Development (residential, industrial, and recreational)                                    | 5                |
| Water impoundments (for wildlife, agricultural, or development)                            | 1                |



By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

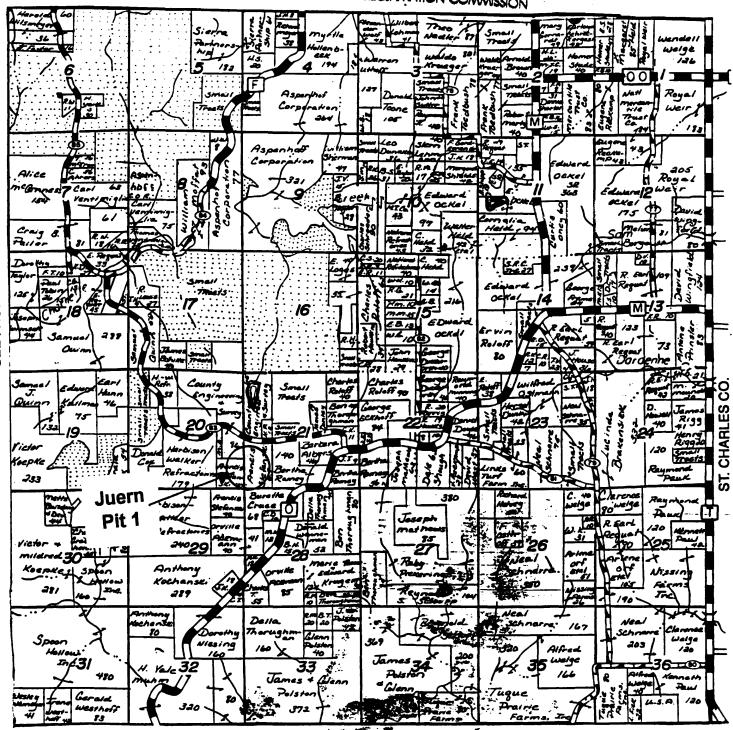
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

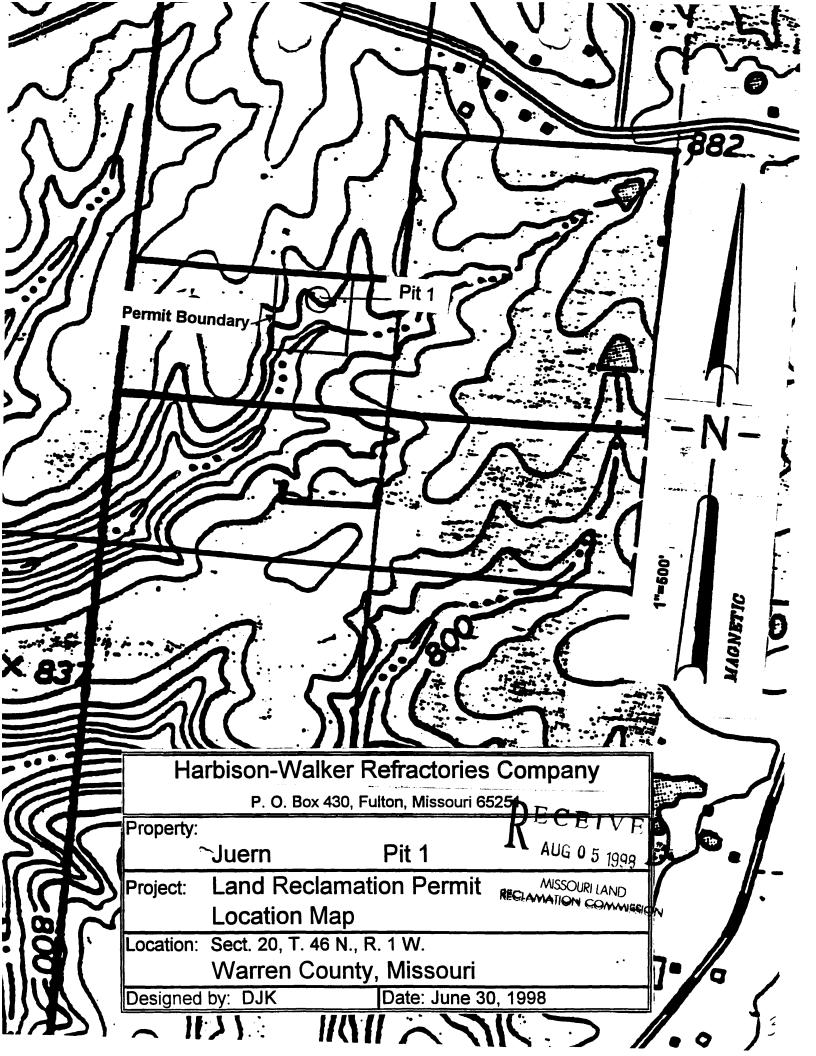
| SIGNATURE OF APPLICANT                     | Manages                               | -Mining   |
|--|---------------------------------------|---|
| NOTARY PUBLIC EMBOSSER SEAL                | STATE                                 | COUNTY (OR CITY OF ST. LOUIS)                                     |
|  | Pennsylvania                          | Allegheny   |
|  | SUBSCRIBED AND SWORN BEFORE ME, THIS  | USE RUPBER STAMP IN   |
| ~  | 14th DAY OF July                      | 19 9 CLEAR AREA BELOW   |
|  | NOTARY PUBLIC SIGNATURE MY COMMI      | ISSION  |
|  | Kathler Juck Expires                  | Notarial Seal<br>Kathleen S. Fuchs, Notary Public                 |
|  | NOTARY PUBLIC NAME (TYPED OR PRINTED) | Pittsburgh, Allegheny County  My Commission Expires Nov. 29, 2001 |
| ADDROVED BY (DIDECTORIS DEDDECTION ATTICE) | 1 1011/14 11 2. 10013                 | BANT NUMBER Member. Pennsylvania Association of Notaries          |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE)    | DATE APPROVED PE                      | RMIT NUMBER   |
| put su                                     | 92-98                                 | 146   |

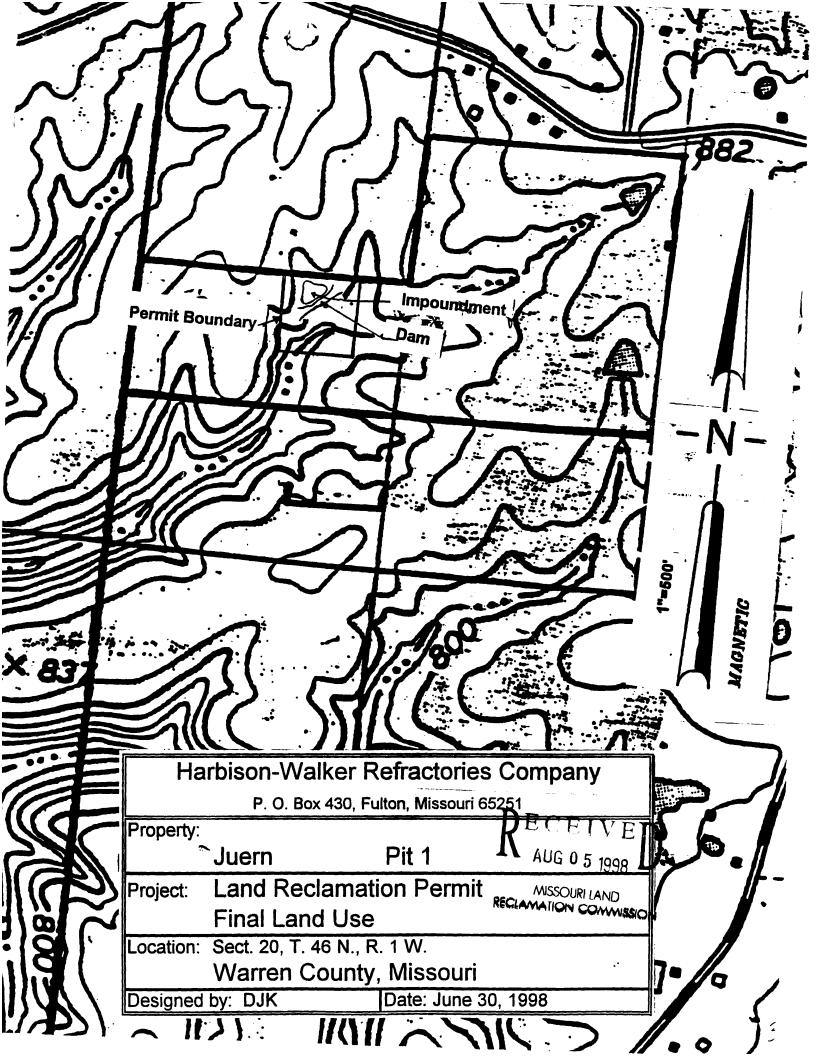
MO 780-1327 (12-91)

## 7 wnship 46 Range 1W RECEIVE Nug 0 5 1998

**SEE PAGE 13** 







## MISSOURI DEPARTMEN → F NATURAL RESOURESEIVED

## LAND RECLAMATION COMMISSION SITE INFORMATION FORM

APR 2 8 2003

P.O. BOX 176 JEFFERSON CITY, MO 65102

| SITE NAME OR NUMBER                                      | MISSOURI LAND<br>RECLAMATION COMMISS   | PERMIT NUMBER                          |
|--|--|--|
| K. M. Craghead 1A  | ALCEANIATION COMMISS                   | 146                                    |
| COMPANY NAME   |  |  |
| Harbison-Walker Refractories Compar                      | ny                                     |  |
| COUNTY   | 1/4 SECTION                            | SECTION                                |
| Callaway   | NE 1/4                                 | 32                                     |
| TOWNSHIP   | RANGE                                  | ACRES                                  |
| 47 N   | 9 W                                    | 8                                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)               |  |  |
|  |  |  |
| MINERAL COMMODITY  |  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay  |  |  |
|  | <del></del>                            |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)       |  |  |
| Mr. Herbert M. Craghead                                  |  |  |
| ADDRESS  |  |  |
| 3415 75th Street   |  |  |
| CITY   | STATE                                  | ZIP CODE                               |
| Lubbock  | TX                                     | 79413                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                     |  | DATE OF AGREEMENT                      |
|  |  | 11/30/1946                             |
| MINERAL DEED   | X LEASE                                |  |
| WARRANTY DEED  | VERBAL AGRI                            | EEMENT                                 |
| OTHER (DESCRIBE):  |  |  |
|  |  |  |
|  |  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)      |  |  |
| Harbison-Walker Refractories Compa                       | ny                                     |  |
| ADDRESS  |  |  |
| 1301 Westminster Avenue                                  |  |  |
| CITY   | STATE                                  | ZIP CODE                               |
| Fulton   | Missouri                               | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                     |  | DATE OF AGREEMENT                      |
|  |  |  |
| MINERAL DEED   | X LEASE                                | 11/30/1946                             |
| WARRANTY DEED  | VERBAL AGR                             | EEMENT                                 |
| OTHER (DESCRIBE):  | <del></del>                            |  |
|  |  |  |
| NOTE: Each site must be sown on a map and be included in | n a public notice and an approved mine | plan.                                  |

## MISSOURI DEPARTMENT OF NAT AL RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



APR 2 8 2003

| TYPE OF PLAN (CHECK ONE):  |   |   |
|--|---|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |   | MISSOURI LAND<br>RECLAMATION COMMISSION   |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | <u>12/31/2050</u>   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTI  | NG (BY APPLICANT OR PRIOR OPERATOR), INCLUDI  | NG SOIL, VEGETATION, AND TOPOGRAPHY.  |
| The site is a genly sloping field used primari portion of the new pit.   | ly for cattle pasture. There is an o  | old clay pit near the south-east  |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |   |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMM   | IISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
| -12  | ! INCHES  | YES X NO  |
|  | ·   |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  | L   | '   |
| Prior to topsoil removal and immediately foll control measures will be installed including sbasins in any combination depending on site scrapers and/or bulldozers. The topsoil will surficial material from all areas to be disturb | straw bale dikes, silt fences, rock<br>e specific conditions. Topsoil will<br>be stored near the pit within the p | check dams or sediment be removed using rubber-tired permitted pit area. We will remove the |
|  |   |   |
|  |   |   |
|  |   |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE  | E AND PROTECTION  |   |
| Surficial material will be stored in gently slop   | oing piles and will be seeded if ne   | cessary with a cover crop   |
| to control any erosion .   |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |
|  |   |   |

| OF SPOIL PLACEMENT AND DISPOSAL  |  |
|--|--|
|  |  |
|  | RECEIVED                               |
|  | APR 2 8 2003                           |
| я  | MISSOURI LAND<br>ECLAMATION COMMISSION |
|  |  |
| NT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| TION OF PIT, IF NOT CLEAR ON SITE MAPS   |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| <u> </u>   |  |
|  |  |
| Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |  |
| public road? (NOTE: For unconsolidated materials left in place, a slope of no more than f<br>start near the right of way, and in no case may the excavation be closer to the right of way<br>or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, | orty degrees may<br>y than fifty feet  |
|  | !<br>!                                 |
|  |  |

| RECLAMATION PLAN - 10 CSR 40-10.0-(2)(    | $\bigcirc$          |                          |
|---|---------------------|--------------------------|
| A. REVEGETATION (Attach additional sheets | , if needed)        |                          |
| REVEGETATION MIX #1                       | PURPOSE OR LAND USE | B. SEEDING OR PLANT TIME |
| Mixture #1                                | Agricultural        | Fall or Spring           |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

RECEIVED

APR 2 8 2003

MISSOURI LAND
RECLAMATION COMMISSION

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES   | POUNDS/ACRE        | TREE OR SHRUB SPE | CIES STEMS/ACRE             |
|---|--------------------|-------------------|-----------------------------|
| Tall Fescue<br>Red Clover<br>Lespediza<br>Wheat or Oats | 25<br>5<br>5<br>30 |                   |                             |
| VEGETATION MIX #2                                       | PURPOSE            | OR LAND USE       | B. SEEDING OR PLANTING TIME |
| Mixture #2  | Agricultu          | ral               | Spring or Fall              |

### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE               | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------------|-----------------------|------------|
| Orchard Grass Timothy Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

| DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES   |   |
|--|---|
| Areas backfilled with spoil from the site will be graded to match the surround and covered with topsoil. Terraces and diversions will be constructed to co |   |
|  |   |
|  | APR 2 8 2003                            |
| F  | MISSOURI LAND<br>RECLAMATION COMMISSION |
|  |   |
| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES  |   |
| GRADING  |   |
| Grading of the site will be performed when back-filling operations have bee  | n completed.                            |
|  |   |
| REPLACEMENT OF TOPSOIL   |   |
| Topsoil will be spread using rubber tired scrapers and/or bulldozers after m   | ining is completed.                     |
| REVEGETATION   |   |
| The site will be seeded in the fall or spring after topsoil replacement.   |   |
| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"   |   |
| D. USE OF LAND WHEN RECLAIMED  | ESTIMATED ACRES:                        |
| Estimate acreage of each land use below, after reclamation:  | ESTIMATED ACINES.                       |
| Wildlife (forest or other habitat with livestock excluded)   | 0                                       |
| Agricultural (pasture, cropland, and horticultural)  | 5                                       |
| Development (residential, industrial, and recreational)  | 0                                       |
| Water impoundments (for wildlife, agricultural, or development)  | 3                                       |

B. GRADING

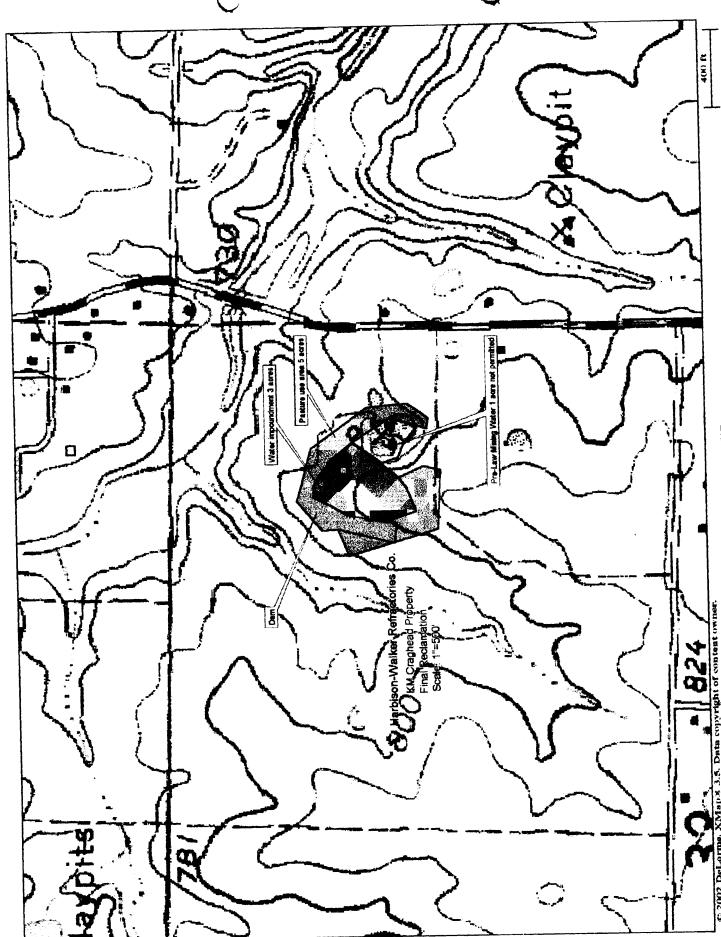


APR 2 8 2003

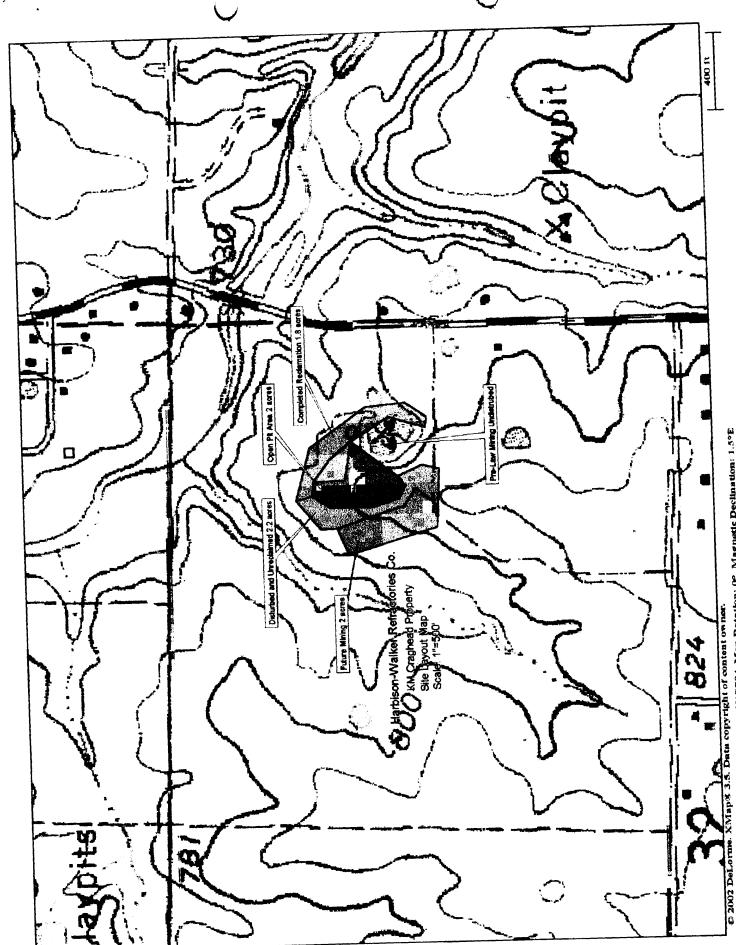
ву my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  |                     | TITLE   | Dec   | Wyer          |                                  |
|---|---------------------|---|-------|---------------|----------------------------------|
| NOTARY PUBLIC EMBOSSER SEAL             | STATE               |   |       | <i>O</i>      | COUNTY (OR CITY OF ST. LOUIS)    |
|   | Missouri            |   |       |               | Callaway                         |
|   | SUBSCRIBED AND SWO  | ORN BEFORE ME, THIS                           |       |               | USE RUBBER STAMP IN              |
|   | 22 DAY OF           | April   |       | 20 0 3        | CLEAR AREA BELOW                 |
|   | NOTARY PUBLIC SIGNA | TURE  | MY CO | MMISSION      |                                  |
|   | Karen S L           | , , , <u>, , , , , , , , , , , , , , , , </u> | EXPIR |               | NOTARY PUBLIC                    |
|   | hadan s             | ume   | •     | 7/18/03       | STATE OF MISSOURI                |
|   | NOTARY PUBLIC NAME  | (TYPED OR PRINTED)                            |       |               | LLAWAY COUNTY                    |
| 1                                       | Karen 5.            | Luther  |       |               | Schmission Expires July 18, 2003 |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | T                   | DATE APPROVED                                 |       | PERMIT NUMBER | <del>'</del>                     |
| E. K. Br                                |                     | 9-17-03                                       |       | 146           |                                  |



© 2002 DeLorms. XMap. 3.5. Data copyright of content owner. Scale: 1:6,(00) Zoom Level: 15-1 Datum: WGS84 Map Rotation: 0° Magnetic Declination: 1.5°E



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| To be completed for each separate                   | area of disturbance associated with | mining operations.             |                   |
|---|-------------------------------------|--------------------------------|-------------------|
| SITE NAME OR NUMBER                                 | PERM                                | IT NUMBER                      |                   |
| Keown   | 73                                  | -146                           |                   |
| COMPANY NAME  |                                     |                                |                   |
| Harbison-Walker Refract                             | ories, a division of INDRE          | ISCO, Inc.                     |                   |
| COUNTY  | 1/4 SECTION                         | SECTION                        |                   |
| Callaway  | Northwest Quarter                   | 29                             |                   |
| TOWNSHIP  | RANGE                               | ACRES                          |                   |
| 45 North  | 10 West                             | 1                              |                   |
| RIVER OR STREAM NAME (FOR IN-STREAM                 | ACRES)                              |                                | · -               |
|   |                                     |                                |                   |
| MINERAL COMMODITY                                   | E211M                               | A I ED TONS/YEAR (FOR GRAVEL S | ITES)             |
| Clay  |                                     |                                |                   |
|   |                                     | Pac                            |                   |
| NAME OF LANDOWNER CO.                               |                                     |                                |                   |
| NAME OF LANDOWNER (ATTACH LIST IF M<br>John Wieburg | ORE THAN ONE)                       | AUG 2                          | 2 8 1992          |
|   |                                     |                                |                   |
| ADDRESS   |                                     | MISSON                         | UN LAND           |
| Highway AA  |                                     | KECEAVIATION                   | COMMISSION        |
| CITY  | STATE                               | i                              | IP CODE           |
| Holts Summit  | Mis                                 | souri                          | 65043             |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                |                                     |                                | DATE OF AGREEMENT |
| MINERAL DEED  | X LEA                               | SE                             | 09/10/68          |
| WARRANTY DEED                                       | U VER                               | BAL AGREEMENT                  |                   |
| OTHER (DESCRIBE):                                   |                                     |                                |                   |
|   |                                     |                                |                   |
|   |                                     |                                |                   |
| MINERAL RIGHTS OWNER (ATTACH LIST IF                | MORE THAN ONE)                      |                                |                   |
| Same as above                                       | ·                                   |                                |                   |
| NDDRESS   |                                     |                                |                   |
|   |                                     |                                |                   |
| CITY  | STATE                               | 77                             | IP CODE           |
| ,,,,  | SIAIE                               | 21                             | IF CODE           |
| OURCE OF RIGHT TO MINE (CHECK ONE):                 |                                     |                                |                   |
| OUNCE OF HIGHT TO MINE (CHECK ONE):  MINERAL DEED   | LEA                                 | <b>\</b>                       | ATE OF AGREEMENT  |
| minus 1715 Calif                                    |                                     | BAL AGREEMENT                  |                   |
| WARRANTY DEED                                       |                                     |                                |                   |

P.O. BOX 176 JEFFERSON CITY, MO 65102

| attitus.   |   |
|--|---|
| TYPE OF PLAN (CHECK ONE):  |   |
| SHORT TERM, FOR ONE PERMIT YEAR  |   |
| M LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2002   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR AND TOPOGRAPHY. | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION |
| KEOWN  |   |
| This plan covers an area of approximately one acre total.  | The permit area is a wooded                 |
| hillside sloping to the east approximately 7 percent. Top  | soil is a rich clay.                        |
|  |   |
|  |   |
|  |   |
|  |   |
|  |   |
| ODERATION DI AN. 40 CCD 40 40 000/0\/D\4   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.<br>A. TOPSOIL  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING                            | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE  |
|  |   |
| 12 - 18 INCHES   | YES OR X NO                                 |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |   |
| Site mined prior to 1990. No topsoil saved. We will either   | er uncover the buried topsoil               |
| or use a substitute soil capable of supporting vegetation.   |   |
|  |   |
| R  | ECEIVED                                     |
| _,   | AUG 2 8 1992                                |
| REC  | MISSCIURI 18350<br>LAMATION COMMISSION      |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION                               |   |
|  |   |

Not applicable.

| B. SPOIL            |   |
|---------------------|---|
| DESCRIBE METHOD     | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| Spoil from          | the pit mined prior to 1990 will be graded to traversable slopes. Some of   |
| the spoil           | will be used to build a small dam on the low end, east side, of the pit.  |
|                     |   |
|                     |   |
|                     |   |
| ļ                   |   |
|                     |   |
|                     |   |
| C. ACID MATER       |   |
| DESCRIBE METHOD     | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WHITE "NONE" BELOW)   |
| None.               |   |
|                     |   |
|                     |   |
|                     |   |
| •                   |   |
|                     |   |
|                     |   |
|                     |   |
| 5 817 1115 6 714    |   |
|                     | ATION (GIVE ALL DIMENSIONS IN FEET) ON AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
|                     |   |
| The pit ha          | s been mined. Not applicable.   |
|                     |   |
|                     |   |
|                     |   |
| 1                   |   |
| !                   |   |
|                     |   |
| <u> </u>            |   |
|                     |   |
|                     |   |
| YES NO              |   |
|                     | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                     |   |
|                     | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|                     | Will any excavation start at or within fifty feet (50') of any property line?   |
|                     | (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
| MO 780-1327 (12-91) | PAGE 2 OF 5   |

| HECLAMATION PLAN    |                                      |                             |
|---------------------|--------------------------------------|-----------------------------|
| A. REVEGETATION     | Attach additional sheets, if needed) |                             |
| REVEGETATION MIX #1 | PURPOSE OR LAND USE                  | B. SEEDING OR PLANTING TIME |
| Mixture #1          | Pasture                              | Fall or Spring              |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulwill be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2          | Pasture             | Fall or Sp            | rina       |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulci will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                   | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------------------------|-------------|-----------------------|------------|
| Orchard Grass                    | 10          |                       |            |
| Korean Lespedeza                 | 6           |                       |            |
| Wheat or oats                    | 30          |                       |            |
| Use serecea lespedeza on slopes. | 20          |                       |            |
|                                  |             |                       |            |
|                                  |             |                       |            |

B. GRADING

## DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

All spoil and pit areas above the anticipated water level will be graded to traversable slopes. An impoundment will be left in the northern portion of the permit area.

Terraces will be built as necessary to control erosion.

X A VARIANCE TO THE 12 MONTH GRADING REQUIREMENT HAS BEEN REQUESTED ON THIS PIT.

## C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will begin as soon as practical. Grading is expected to be completed by 1995.

### REPLACEMENT OF TOPSOIL

A soil suitable for plant growth will be spread over the disturbed area as soon as grading is complete.

#### REVEGETATION

All disturbed areas will be seeded the next spring or fall after final grading.

| 6 - 12 inches  |                  |  |
|--|------------------|--|
| D. USE OF LAND WHEN RECLAIMED                              | ESTIMATED ACRES: |  |
| Estimate acreage of each land use below, after reclamation |                  |  |
| Wildlife (forest or other habitat with livestock excluded) |                  |  |
| Agricultural (pasture, cropland, and horticultural)        | 1/2              |  |

Water impoundments (for wildlife, agricultural, or development)

Development (residential, industrial, and recreational)

1/2

MO 780-1327 (12-91)

## By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT      |                                    | TITLE                          |                | DATE                        |
|-----------------------------|------------------------------------|--------------------------------|----------------|-----------------------------|
| Jeffrey P. Jahn             | Jeff Je                            | Manager-<br>Mining & Explor    | ation          | 8/17/92                     |
| NOTARY PUBLIC EMBOSSER SEAL | SUBSCRIBED AND SWORN BEFORE ME. TH |                                | COUNTY (OR CIT | gheny                       |
|                             | 17th DAY OF Que                    | ust, 19 92                     | USE RUBBE      | R STAMP IN CLEAR AREA BELOW |
|                             | Loretta M. Gottachling             | MY COMMISSION EXPIRES  3-20-95 |                |                             |
|                             | Loretta M. Gottso                  | hlina                          |                |                             |
| APPROVED BY (DIRECTOR'S REP | RESENTATIVE)                       | DATE ARPROVED                  |                | PERMIT NUMBER               |

Callaway PECEIVE D

AUG 2 8 1992

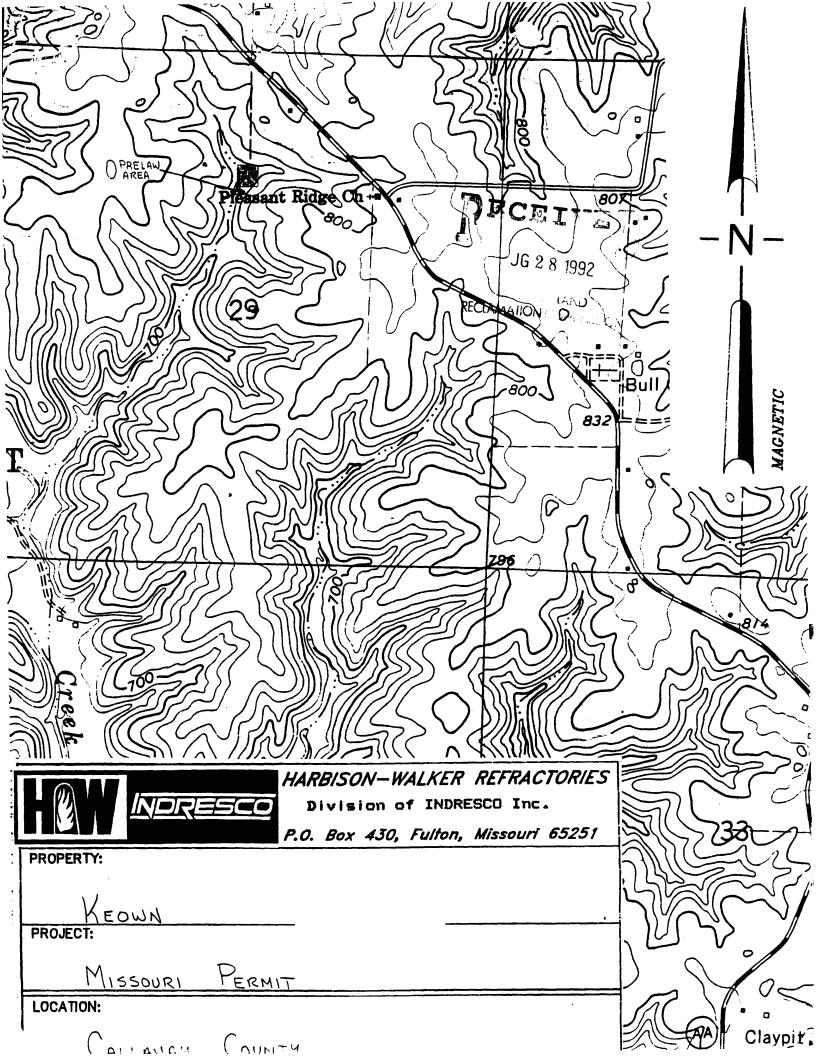
T. 45 N. – R. 10 W. PAGE 27 Clyde R Barrow, etux John Huesge Norma Tean Dozier nning-field James E Bray 179.7 Joe W. Rogens William William J. Wewerka Perry etux SEE PAGE 35

> Support The CALLAWAY COUNTY

32

MFA EXCHANGE





| To be completed for each separa   | te area of disturbance associate   | ed with mining operation | s.                |  |  |
|-----------------------------------|--|--------------------------|-------------------|--|--|
| SITE NAME OR NUMBER               |  | PERMIT NUMBER            |                   |  |  |
| Martin 3                          |  | 146                      |                   |  |  |
| COMPANY NAME                      |  | 1                        |                   |  |  |
| Harbison-Walker Refrac            | tories, Division of IND  | RESCO Inc.               |                   |  |  |
| COUNTY                            | 1/4 SECTION  |                          | SECTION           |  |  |
| Warren                            | NW ½   |                          | 26                |  |  |
| TOWNSHIP                          | RANGE  |                          | ACRES             |  |  |
| 47 North                          | 1 West   |                          | 3                 |  |  |
| RIVER OR STREAM NAME (FOR IN-STRE | AM ACRES)  |                          | ·                 |  |  |
|                                   |  |                          |                   |  |  |
| MINERAL COMMODITY                 |  | ESTIMATED TONS/YEAR (F   | OR GRAVEL SITES)  |  |  |
| Clay                              |  |                          |                   |  |  |
|                                   |  | 1                        |                   |  |  |
| NAME OF LANDOWNER (ATTACH LIST I  | F MORE THAN ONE!   |                          |                   |  |  |
|                                   | · ····································   |                          |                   |  |  |
| Colleen Martin                    |  |                          |                   |  |  |
| R. R. #3                          |  |                          |                   |  |  |
| CITY                              | The state of the s | STATE                    | ZIP CODE          |  |  |
| Wright City                       |  | Missouri                 | 63390             |  |  |
| SOURCE OF RIGHT TO MINE (CHECK O  | NE):   |                          | DATE OF AGREEMENT |  |  |
| MINERAL DEED                      | ·  | LEASE                    |                   |  |  |
| WARRANTY DEED                     |  | VERBAL AGREEMENT         |                   |  |  |
| OTHER (DESCRIBE):                 |  |                          |                   |  |  |
|                                   |  |                          |                   |  |  |
|                                   | •  |                          |                   |  |  |
| MINERAL RIGHTS OWNER (ATTACH LIS  | T IE MODE THAN ONE)  | <del>_</del> .           |                   |  |  |
| •                                 | tories, Division of IND  | RESCO Inc                |                   |  |  |
| ADDRESS                           | DIVISION OF INC  |                          |                   |  |  |
| P. O. Box 430, 1301 We            | stminster Avenue   |                          |                   |  |  |
| CITY                              |  | STATE                    | ZIP CODE          |  |  |
| Fulton                            |  | Missouri                 | 65251             |  |  |
|                                   | DECEIVE  |                          | DATE OF AGREEMENT |  |  |
| SOURCE OF RIGHT TO MINE (CHECK O  |  |                          |                   |  |  |
| WARRANTY DEED                     | JUN 25 1993  | December 1, 1959         |                   |  |  |
|                                   | MISSOURITAND   | L VERBAL AGREEMENT       |                   |  |  |
| OTHER (DESCRIBE):                 | RECLAMATION CONVINSION   |                          |                   |  |  |



## MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION MINE PLAN

P.O. BOX 176 JEFFERSON CITY, MO 65102

| YPE OF PLAN (CHECK ONE):   |  |
|--|--|
| SHORT TERM, FOR ONE PERMIT YEAR  |  |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2003   |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR MARTIN 3  | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION                    |
| This plan covers a total area of 3 acres containing one clay planted in fescue grass. There is a small private road used through the northern portion of the pit. Topsoil is thick and | y two households which runs                                    |
| DPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |  |
| A. TOPSOIL   |  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?                    |
| 12INCHES   | YES OR NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |  |
| Topsoil will be removed by dozers and rubber-tired scrapers at the permit area. We will remove at least 12 inches from all degins.   | nd stored near the pit within<br>disturbed areas before mining |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |  |
| Topsoil will be stored in gently sloping piles. Topsoil store annual grasses as needed to control erosion.   | age piles will be seeded with                                  |



JUN 25 1993

| A. | SPO | IL |
|----|-----|----|

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

The pit will be mined in two phases. The northern half of the pit containing the small private road will be mined first. The private road will be diverted to the south and a berm at least 3 feet high will be built between the temporary road and the pit. After the first phase is mined the southern half of the pit will be mined and the spoil will be placed in the mined out area to the north. After the spoil is graded the road will be put back near its original location. A one acre impoundment left will be the mined out southern half of the pit.

| $\sim$ | A (~) | <b>n</b> | MA' | TE | 0 | 1 A I |    |
|--------|-------|----------|-----|----|---|-------|----|
| U. /   | 40    | טו       | MM  | 15 | n |       | _3 |

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

None.

## D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

The pit is approximately 100 feet long north to south and 250 long east to west. The pit lies in the north central portion of the permit area.



JUN 25 1993

| YES        | NO        |   |
|------------|-----------|---|
|            | X         | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|            | X         | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|            | X         | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
| MO 780-132 | 7 (12-91) | PAGE 2 OF 5   |

| RECLAMATION PLAN - 10 CSF | 40-10.020(2)(D)2.            |                             |
|---------------------------|------------------------------|-----------------------------|
| A. REVEGETATION (Attach a | dditional sheets, if needed) |                             |
| REVEGETATION MIX #1       | PURPOSE OR LAND USE          | B. SEEDING OR PLANTING TIME |
| Mixture #1                | Pasture                      | Fall or Spring              |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE     |  |
|---------------------|---------------------|-----------------------|----------------|--|
| Tall Fescue         | . 25                |                       |                |  |
| Red Clover          | 5                   |                       |                |  |
| Wheat or oats       | 30                  |                       |                |  |
|                     |                     |                       |                |  |
|                     |                     |                       |                |  |
|                     |                     | ·                     |                |  |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME     |  |
| Mixture #2 Pasture  |                     | Fall or Sp            | Fall or Spring |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

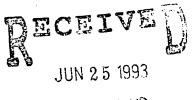
| POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE                 |
|-------------|-----------------------|----------------------------|
| 10          |                       |                            |
| 6           | Tree -                |                            |
| 30          | Control Section 1     | VE                         |
| 20          | JUN 25 1              | 993 .                      |
|             | Operator of           | . <b>.)</b><br>N. <b>.</b> |
|             | 10<br>6<br>30         | 10<br>6<br>30              |

Mi andie Duce teit.

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.



MISSOUN LAND RECLAMATION COMMISSION

| SIGNATURE OF APPLICANT       |                                       | TITLE<br>Vice-President  | DATE June 15, 1993 -Manufacturing    |
|------------------------------|---------------------------------------|--------------------------|--------------------------------------|
| NOTARY PUBLIC SMB OSSER SEAL | STATE Missouri                        |                          | COUNTY (OR CITY OF ST. LOUIS)        |
|                              | SUBSCRIBED AND SWORN BEFORE ME, TH    | IIS                      | Callaway                             |
| 15th DAY OF June             |                                       | 19 93                    | USE RUBBER STAMP IN CLEAR AREA BELOW |
| NOTARY PUBLIC SIGNATURE      |                                       | MY COMMISSION<br>EXPIRES | MARY SUE FLETCHER                    |
| Than Sue Iletoher            |                                       | 04/11/1996               | NOTARY PUBLIC STATE OF MISSOURI      |
|                              | NOTARY PUBLIC NAME (TYPED OR PRINTED) |                          | CALLAWAY COUNTY                      |
|                              | Mary Sue Fletcher                     |                          | MY COMMISSION EXP. APR. 11,1996      |
| APPROVED BY (DIRECTOR'S REPR | ESENTATIVE)                           | DATE APPROVED            | PERMIT NUMBER -                      |
| Herm J.                      | Solen                                 | 7-8-93                   | 146                                  |
| 10 700 1000                  | -                                     |                          |                                      |

MO 780-1327 (12-91)

110 780-5036 (12 61).

| To be completed for each separate    | area of disturbance assoc | ciated with mining operatio  | ns.                |  |  |
|--------------------------------------|---------------------------|------------------------------|--------------------|--|--|
| SITE NAME OR NUMBER                  |                           | PERMIT NUMBER                | PERMIT NUMBER      |  |  |
| Meyer 8                              |                           | 146                          | 146                |  |  |
| COMPANY NAME                         |                           |                              |                    |  |  |
| Harbison-Walker Refractor            | ries. Division of I       | NDRESCO Inc.                 |                    |  |  |
| COUNTY                               | 1/4 SECTION               |                              | SECTION            |  |  |
| Warren                               | SE <del>l</del>           |                              | 8                  |  |  |
| TOWNSHIP                             | RANGE                     |                              | ACRES              |  |  |
| 46 North                             | 2 West                    |                              | 3                  |  |  |
| RIVER OR STREAM NAME (FOR IN-STREAM  |                           |                              |                    |  |  |
| RIVER OR STREAM NAME (FOR IN-STREAM  | ACRES                     |                              |                    |  |  |
|                                      |                           |                              |                    |  |  |
| MINERAL COMMODITY                    |                           | ESTIMATED TONS/YEAR          | (FOR GRAVEL SITES) |  |  |
| Clay                                 |                           |                              |                    |  |  |
|                                      |                           |                              |                    |  |  |
| NAME OF LANDOWNER (ATTACH LIST IF M  | ORE THAN ONE)             |                              |                    |  |  |
| Pamela M. Illy                       |                           |                              |                    |  |  |
| ADDRESS                              |                           |                              |                    |  |  |
|                                      |                           |                              |                    |  |  |
| Route 1, Box 260                     |                           |                              |                    |  |  |
| CITY                                 |                           | STATE                        | ZIP CODE           |  |  |
| Warrenton                            |                           | Missouri                     | 63383              |  |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE)  | :                         |                              | DATE OF AGREEMENT  |  |  |
| MINERAL DEED                         |                           | L LEASE                      |                    |  |  |
| WARRANTY DEED                        |                           | WERBAL AGREEMENT             | ,                  |  |  |
| OTHER (DESCRIBE):                    | -                         |                              |                    |  |  |
|                                      |                           | B                            |                    |  |  |
|                                      |                           |                              | CEIVEN             |  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST II | F MORE THAN ONE)          |                              | HIALO S            |  |  |
| Harbison-Walker Refractor            | ·                         | INDRESCO Inc.                | JUN 25 1993        |  |  |
| ADDRESS                              |                           |                              | MISSOURI LAND      |  |  |
| P. O. Box 430, 1301 West             | ningtor Avonus            | RECL                         | AMATION COMMISSION |  |  |
|                                      | minster Avenue            |                              |                    |  |  |
| CITY                                 |                           | STATE                        | ZIP CODE           |  |  |
| Fulton                               |                           | Missouri                     | 65251              |  |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE   | );                        |                              | DATE OF AGREEMENT  |  |  |
| MINERAL DEED                         |                           | X LEASE                      | May 16, 1956       |  |  |
| WARRANTY DEED                        |                           | VERBAL AGREEMENT             |                    |  |  |
| OTHER (DESCRIBE):                    |                           |                              |                    |  |  |
|                                      |                           |                              |                    |  |  |
| NOTE: Each site must be shown or     | a map and be included i   | in a public notice and an ag | pproved mine plan. |  |  |

P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (GRECK ONE).   |
|---|
| SHORT TERM, FOR ONE PERMIT YEAR   |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2003  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.  |
| MEYER 8   |
| This plan covers a total area of 3 acres containing one clay pit. Meyer 8 lays on a hill-side of approximaately 5 to 10 percent. The area is planted in fescue grasses. An old hand dug pit lies on the west portion of the pit. Topsoil is thick and adequate. |
|   |
|   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |
| A. TOPSOIL  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
| $\frac{12}{}$ INCHES $\square$ YES OR $\square$ NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   |
| Topsoil will be removed by dozers and rubber-tired scrapers and stored near the pit within the permit area. We will remove at least 12 inches from all disturbed areas before mining begins.  |
|   |
|   |
|   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION  |
|   |
| Topsoil will be stored in gently sloping piles. Topsoil storage piles will be seeded with annual grasses, if necessary, to control erosion.   |



JUN 25 1993

MISSOURI LAND RECLAMATION COMMISSION

| B. SPOI        | L       |   |
|----------------|---------|---|
| DESCRIBE       | METHODS | AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| a sma<br>not e | 11 dam  | com the pit will be placed on the lower portion (north) side of the pit to form. The dam will be built using SCS Ponds 378 standards for Missouri. The dam is to be higher than 35 feet. The dam will also cover up the old hand dug pit on de of Meyer 8.  |
| C. ACID        | MATER   | ALS   |
| DESCRIBE       | METHODS | AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| None.          |         |   |
| D. PIT I       | NFORMA  | TION (GIVE ALL DIMENSIONS IN FEET)  |
|                |         | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
| The p          | oit is  | "L" shaped and is 140 feet wide by 300 feet long.   |
|                |         | DECEIVED JUN 25 1993  |
|                |         | MISSOURI LAND RECLAMATION COMMISSION  |
| YES            | NO      |   |
|                | X       | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                | X       | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|                | X       | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

|                | `                |   |
|----------------|------------------|---|
| B. SPOII       |                  |   |
| DESCRIBE       | METHODS          | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| a sma<br>not e | 11 dam<br>xpecte | rom the pit will be placed on the lower portion (north) side of the pit to form . The dam will be built using SCS Ponds 378 standards for Missouri. The dam is d to be higher than 35 feet. The dam will also cover up the old hand dug pit on de of Meyer 8. |
|                |                  |   |
|                |                  |   |
|                |                  |   |
|                |                  |   |
|                |                  |   |
| - 1015         |                  |   |
| C. ACID        |                  | IALS<br>S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| DESCRIBE       | METHOD           | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE 13 ANTICIPATED, WRITE NONE BELOW)   |
| None.          |                  |   |
|                |                  |   |
| :              |                  |   |
|                |                  |   |
|                |                  |   |
|                |                  | •   |
|                |                  |   |
|                |                  |   |
|                |                  |   |
|                |                  |   |
|                |                  | ATION (GIVE ALL DIMENSIONS IN FEET) IN AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
| DESCRIBE       | LOCATIC          | IN AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
| The p          | oit is           | "L" shaped and is 140 feet wide by 300 feet long.   |
| ĺ              |                  |   |
| i              |                  |   |
|                |                  |   |
|                |                  | DECEIVE   |
|                |                  |   |
|                |                  |   |
|                |                  | JUN 25 1993   |
|                |                  | MISSOURI LAND   |
| -              |                  | RECLAMATION COMMISSION  |
|                |                  |   |
|                |                  |   |
| YES            | NO               |   |
|                | X                | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                | ক্রে             |   |
|                | X                | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may                                       |
|                |                  | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|                |                  | or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is  |
|                |                  | greater, unless a variance is granted by the Commission.)   |
|                | X                | Will any averyation start at acquishin fifty fact (50% of any preparty line)  |
|                | لخف              | Will any excavation start at or within fifty feet (50') of any property line?  (NOTE: If the answer is "yes", a safety barrier may be needed.)  |
| ŀ              |                  | ,   |

PAGE 2 OF 5

MO 780-1327 (12-91)

| RECLAMATION PLAN    | - 10 CSR 40-10.020(2   | )(D)2.              |                             |   |
|---------------------|------------------------|---------------------|-----------------------------|---|
| A. REVEGETATION     | (Attach additional she | ets, if needed)     |                             |   |
| REVEGETATION MIX 81 |                        | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME | • |
| Mixture #1          |                        | Pasture             | Fall or Spring              |   |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE             | TREE OR SHRUE | SPECIES            | STEMS/ACRE |
|---------------------|-------------------------|---------------|--------------------|------------|
| Tall Fescue         | 25                      |               |                    |            |
| Red Clover          | 5                       |               |                    |            |
| Wheat or oats       | 30                      |               |                    |            |
|                     |                         |               |                    |            |
|                     |                         |               |                    |            |
|                     |                         |               | J                  |            |
| REVEGETATION MIX #2 | <br>PURPOSE OR LAND USE |               | B. SEEDING OR PLAN | ITING TIME |
| Mixture #2          | Pasture                 |               | Fall or Spr        | ing        |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES   | POUNDS/ACRE         | TREE OR SHRUB SPECIES               | STEMS/ACRE |
|--|---------------------|-------------------------------------|------------|
| Orchard Grass  Korean Lespedeza  Wheat or oats  Use serecea lespedeza on slopes. | 10<br>6<br>30<br>20 | JUN 25 1993  RECLANATION COMMISSION |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

|  |                                | -  |
|--|--------------------------------|--|
| B. GRADING   |                                |  |
| DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES   |                                |  |
| A one acre impoundment will be left by the mined out pit. the anticipated water level will be graded to traversable tired scrapers. Terraces and diversion ditches will be co runoff and erosion. Fescue hay bales will be staked down | slopes using donstructed as ne | ozers and rubber-<br>ecessary to control |
|  |                                |  |
|  |                                |  |
| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING   | ACTIVITIES                     |  |
| GRADING  |                                |  |
| Grading will be done as the pit advances and spoil is place grading of all disturbed areas will be completed within on   |                                |  |
| REPLACEMENT OF TOPSOIL   |                                |  |
| Topsoil will be laid down using rubber-tired scrapers and grading is complete.   | dozers within (                | one year after                           |
| REVEGETATION   |                                |  |
| The site will be seeded the next Spring or Fall following  | topsoil replace                | ement.                                   |
| · •  |                                |  |
| AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES) 12 inches   |                                |  |
| D. USE OF LAND WHEN RECLAIMED  |                                | ECTIMATED ACCES                          |
| Estimate acreage of each land use below, after reclamation   |                                | ESTIMATED ACRES:                         |
| Wildlife (forest or other habitat with livestock excluded)   |                                |  |
| Agricultural (nacture, cropland, and horticultural)  |                                | 2  |

Development (residential, industrial, and recreational)

Water impoundments (for wildlife, agricultural, or development)

1

By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

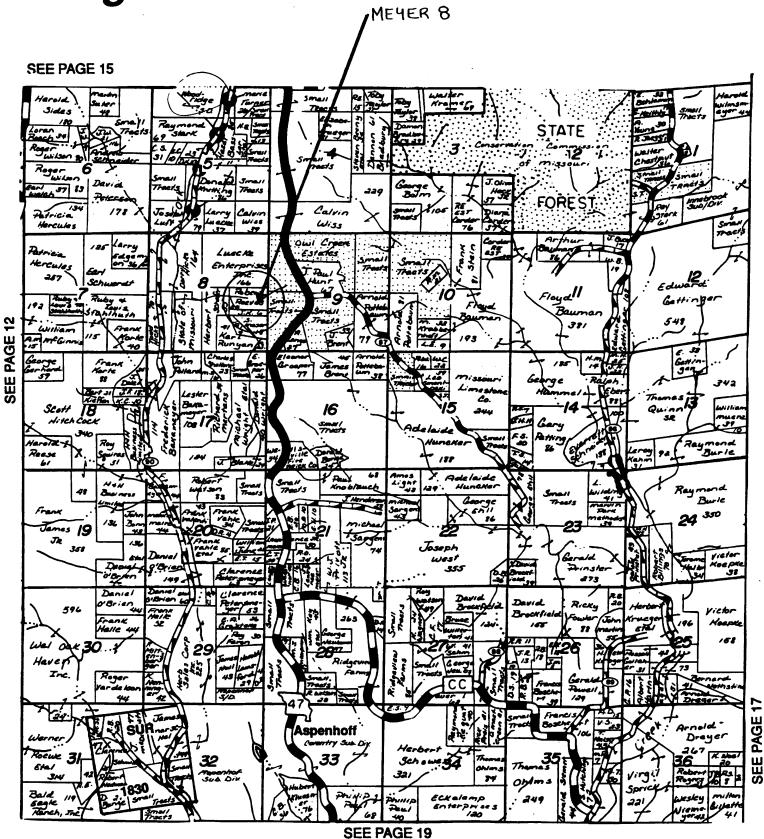


MISSOURI LAND RECLAMATION COMMISSION

| •                            |                         |              |          |  |                             |   |
|------------------------------|-------------------------|--------------|----------|--|-----------------------------|---|
| SIGNATURE OF APPLICANT       |                         | T            | TITLE    |  | DATE                        |   |
| $ \langle \rangle \rangle$   | $(M,tM_{\alpha})$       |              |          |  |                             | June 15, 1993                                 |
| MMC                          | IVUXX                   |              |          | Vice-President-Manufacturing           |                             |   |
| NOTARY PUBLIC EMBOSSER SEAL  | STATE                   |              |          |  | COUNTY (OR CIT              | TY OF ST. LOUIS)                              |
|                              | Missouri                |              |          |  |                             |   |
|                              | SUBSCRIBED AND SWO      | RN BEFORE    | ME, THIS |  | Callaway                    |   |
| 15th DAY OF June             |                         |              | 19 93    | USE RUBBE                              | R STAMP IN CLEAR AREA BELOW |   |
| NOTARY PUBLIC SIGNATURE      |                         |              |          | MY COMMISSION<br>EXPIRES               |                             |   |
|                              | May Suc                 |              | der      | 04/11/1996                             |                             | MARY SUE FLETCHER<br>PUBLIC STATE OF MISSOURI |
| , `                          | NOTARY PUBLIC NAME (TYP | PED OR PRINT | TED)     |  |                             | CALLAWAY COUNTY                               |
|                              | Mary Sue Flet           | cher         |          |  | MY CON                      | MMISSION EXP. APR. 11,1996                    |
| APPROVED BY (DIRECTOR'S REPR | ESENTATIVE)             |              | C        | ATE APPROVED                           |                             | PERMIT NUMBER '                               |
| SP LL                        | you                     |              |          | ••                                     |                             | )46   |
| MO 780-1327 (12-91)          | MOV-                    |              |          | ······································ |                             | PAGE 5 OF 5                                   |

PAGE 5 OF 5

Township 46 Range 2W





# . ←IISSOURI DEPARTMENT OF N JRAL RESOURCE

LAND RECLAMATION COMMISSION

P.O. BOX 176 JEFFERSON CITY, MO 65102

| SITE INFORMATION FORM   | MISSOURI (     | JEFFERSON CITY, MO 6510                |  |
|---|----------------|--|--|
| TITE NAME OR NUMBER   | RECLAMATION CO | DMMISERALI NUMBER                      |  |
| -William Potthast Pit 13  |                | 146                                    |  |
| OMPANY NAME   |                |  |  |
| Harbison-Walker Refractories Company                            |                |  |  |
| OUNTY   | 1/4 SECTION    | SECTION                                |  |
| Warren  | SE1/4          | 12                                     |  |
| OWNSHIP   | RANGE          | ACRES                                  |  |
| 46N   | 3W 7           |  |  |
| IVER OR STREAM NAME (FOR IN-STREAM ACRES)                       |                |  |  |
| INERAL COMMODITY  |                | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |  |
| Fire Clay   |                |  |  |
| Mr. or I Albanian and a second                                  |                |  |  |
| ame of Landowner (attach a list if more than one)  Larry Barton |                |  |  |
| DORESS  |                |  |  |
| P.O. Box 454  |                |  |  |
| TY  | STATE          | ZIP CODE                               |  |
| Warrenton   | Missouri       | 63383                                  |  |
| URCE OF RIGHT TO MINE (CHECK ONE):                              |                | DATE OF AGREEMENT                      |  |
| MINERAL DEED  | LEASE          | JUL 3 ASILEMENT                        |  |
| WARRANTY DEED   | VERBAL AG      | REEMENT                                |  |
| OTHER (DESCRIBE):   |                |  |  |
| IERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               | ·              |  |  |
| Harbison-Walker Refractories Company                            |                |  |  |
| RESS  | <del>-</del>   |  |  |
| P. O. Box 430   |                |  |  |
| ,   | STATE          | ZIP CODE                               |  |
| Fulton  | Missouri       | 1                                      |  |
| RCE OF RIGHT TO MINE (CHECK ONE):                               |                | 65251 DATE OF AGREEMENT                |  |
| Y MINERAL TOTAL   |                | No. of Section 1                       |  |
| X MINERAL DEED  | LEASE          | Contact                                |  |
| WARRANTY DEED   | <u></u>        | September 13, 1910                     |  |
|   | VERBAL AGRE    | EMENT                                  |  |
| OTHER (DESCRIBE):   |                |  |  |

NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.

# MISSOURI DEPARTMENT OF NATU. RESOURCES LAND RECLAMATION COMMISSION

MO 780-1327 (12-91)

# PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES



Page 1

|  |                           | MAI\ 1 1 1991 —   |
|--|---------------------------|---|
| i YPE OF PLAN (CHECK ONE):   |                           | MISSOURI LAND   |
| SHORT TERM, FOR ONE PERMIT YEAR  |                           | RECLAMATION COMMISSION                                      |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | 03/01/2007                |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERM  | ITTING (BY APPLICANT OR P | RIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY. |
| This plan covers a total area of 7 acres conta   | ining 1 pit. Before       | e mining the site was an open field in pasture.             |
| The topsoil is good and the slopes are gentle  | 2.                        |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |                           |   |
|  |                           |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSIO  | ON PERMITTING             | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?                 |
|  |                           |   |
| 12   | INCHES                    | YES X NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |                           |   |
| Topsoil will be removed using rubber-tired near the pit within the permit area. We wil disturbed before mining or stripping begins | l remove the 12 inc       |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND  | PROTECTION                |   |
| Surficial material will be stored in gently slo  | pping piles and will      | be seeded with annual grasses, if necessary,                |
| to control any erosion.  |                           | 3   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |
|  |                           |   |

| B. SP     | POIL                 |                 |   | $\smile$   |
|-----------|----------------------|-----------------|---|--|
| DESCRIE   | BE METHODS .         | AND LOCATION    | OF SPOIL PLACEMENT AND DISPOSAL   |  |
|           |                      |                 |   |  |
|           | W/e <del>wi</del> 11 | evenunte th     | se pit and place the overhurde  | n in the low-lying area to the west of the pit.                                  |
|           |                      |                 |   | zers. The spoil will be graded to a traversable                                  |
|           | -                    |                 | olacement.  | zers. The spoin will be graded to a traversable                                  |
|           | stope since          | ortry arror j   |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
| C AC      | CID MATE             | RIALS           | _   |  |
|           |                      |                 | THE FOR HANDLING ACID MATERIALS (   | F NONE IS ANTICIPATED, WRITE "NONE" BELOW)                                       |
| DEGGA     | DE METITODO          | FILLE ENGON MEN | TOOLS TO THINK DENTO HOLD IN THE WILES P  | None is an analysis of the second  |
|           | None                 |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   | 1  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
| PIT IN    | IFORMATI             | ION (GIVE /     | ALL DIMENSIONS IN FEET)   |  |
| DESCRI    | BE LOCATION          | AND ORIENTAT    | TION OF PIT, IF NOT CLEAR ON SITE MAPS  |  |
|           | The site             | is located t    | to the west of Highway U. W   | e will haul out of the pit from an existing road                                 |
|           |                      |                 | oit site to Missouri Highway U  | •  |
|           | 8                    | 1               | 3 ,   |  |
|           |                      |                 |   |  |
|           |                      |                 |   |  |
|           |                      |                 |   | _  |
|           |                      |                 |   | DECEIVE  |
|           |                      |                 |   | RECEIVED MAR 1 1 1997  |
|           |                      |                 |   | MAR 1 1 1997   |
|           |                      |                 |   | 4400-  |
|           |                      |                 |   | MISSOURI LAND<br>RECLAMATION COMMISSION  |
| -         |                      |                 | ·   | COMMISSION   |
|           | YES                  | NO              |   |  |
| i.        | 120                  | 110             |   |  |
|           |                      | X               | Will any excavation be at or within fifty   | eet (50') of the right-of-way of any public road?                                |
|           |                      |                 |   |  |
|           |                      | <b>X</b>        | Will any highwall consisting of unconso   | lidated materials be left within fifty feet of the right-of way of and           |
|           |                      |                 |   | ed materials left in place, a slope of no more than forty degrees may            |
|           |                      |                 |   | se may the excavation be closer to the right of way than fifty feet              |
|           |                      |                 | or twenty-five feet plus on an one-half (<br>greater, unless a variance is granted by | 1-1/2) times the depth of unconsolidated material, whichever is the Commission.) |
|           |                      |                 | g. sales, alliese a validation to granted by  |  |
|           |                      | X               | Will any excavation start at or within fift   |  |
| 1         |                      |                 | (NOTE: If the answer is "yes", a safe   | y barrier may be needed.)  |
| MO 780-13 | 127 (12-91)          |                 |   | Page 2   |



| A. REVEGETATION (Attach additional sheets, if | needed)             | MISSOURITAND                                 |
|---|---------------------|--|
| REVEGETATION MIX #1                           | PURPOSE OR LAND USE | RECLAMATION COMMISSION SEEDING OR PLANT TIME |
| Mixture #1                                    | Agricultu           | ıre Fall                                     |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|-----------------|-------------|-----------------------|------------|
|                 |             |                       |            |
| Tall Fescue     | 25          |                       |            |
| Red Clover      | 5           | I I                   |            |
| Wheat or Oats   | 30          |                       |            |

| į |                   |                     |                             |
|---|-------------------|---------------------|-----------------------------|
|   | VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|   | Mixture #2        |                     |                             |

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDING SPECIES POUNDS/ACRE TREE OR SHRUB SPECIES STEMS/ACRE

|                                  |  | THEE SHOTHER OF ESIZE   | OTEMO/ TORKE  |
|----------------------------------|--|---|---|
|                                  |  |   |   |
| Orchard Grass                    | 10   | •   |   |
| Korean Lespedeza                 | 6  |   |   |
| Wheat or Oats                    | 30   |   |   |
| Serecea Lespedeza<br>(On Slopes) | 20   |   |   |
|                                  | Korean Lespedeza<br>Wheat or Oats<br>Serecea Lespedeza | Orchard Grass 10 Korean Lespedeza 6 Wheat or Oats 30 Serecea Lespedeza 20 | Orchard Grass 10 Korean Lespedeza 6 Wheat or Oats 30 Serecea Lespedeza 20 |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

# **B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

RECIAMAR 1 1 1997 D

RECIAMATION COMMISSION Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### GRADING

Grading will be done as mining advances and as spoil is either backfilled or put into a dam. Final grading of all disturbed areas will be completed within one year after mining.

## REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

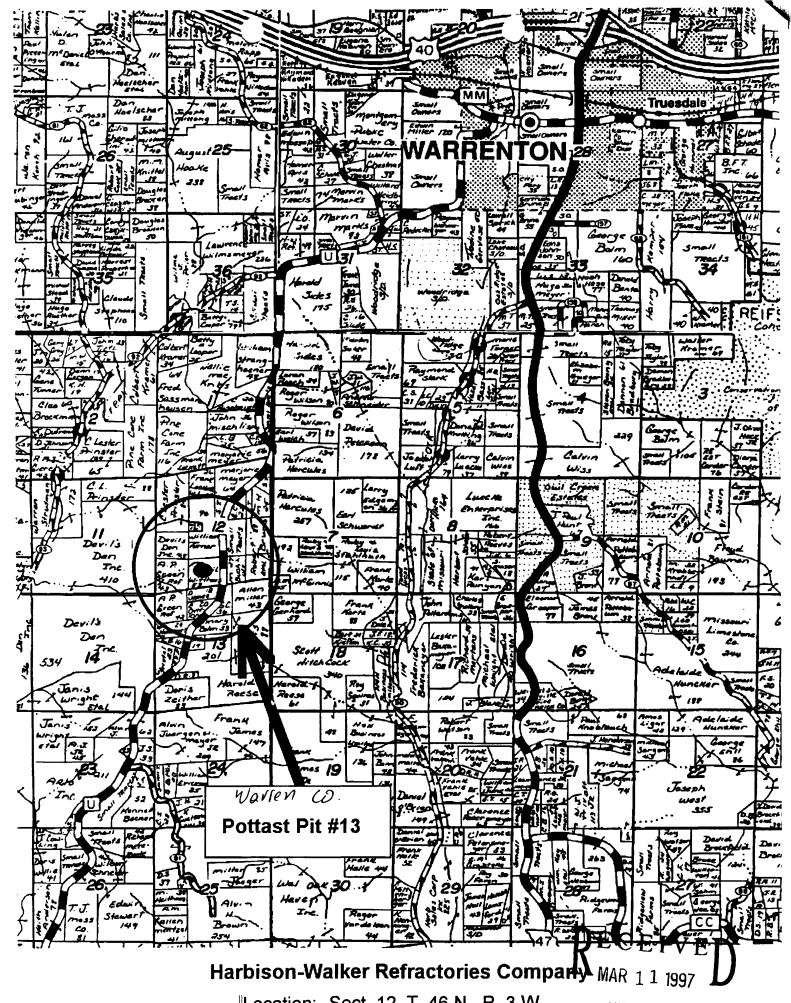
| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 5                |
| Development (residential, industrial, and recreational)                                    | 0                |
| Water impoundments (for wildlife, agricultural, or development)                            | 2                |

By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

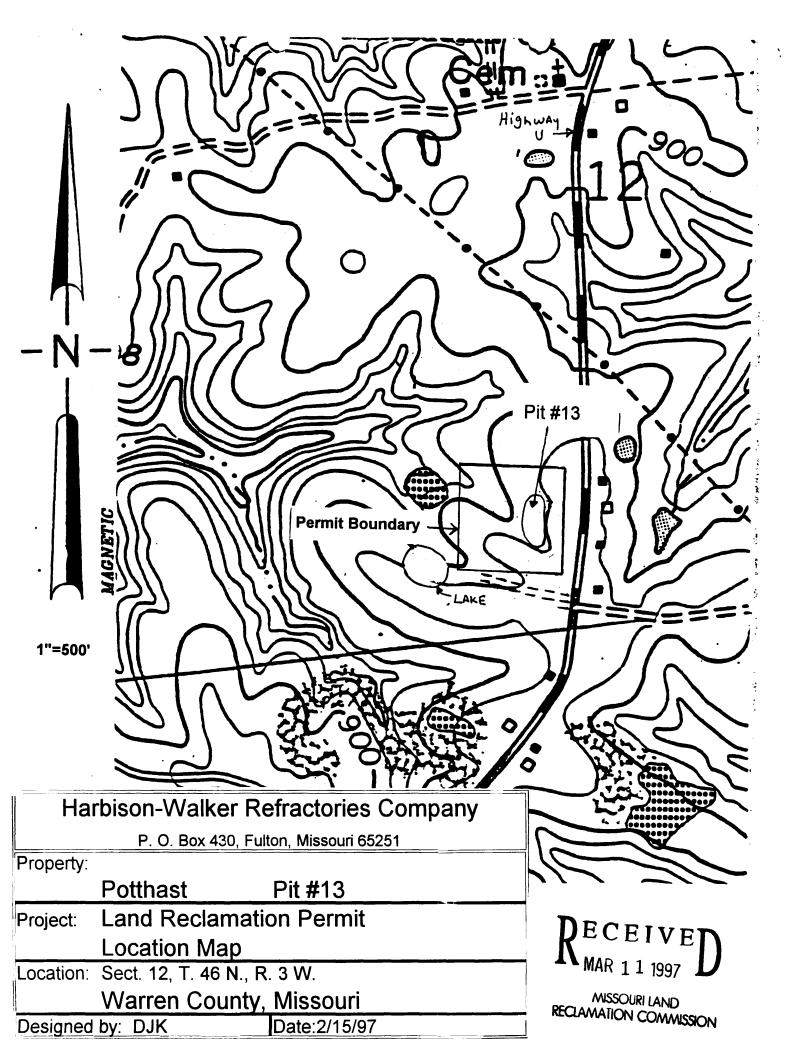
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

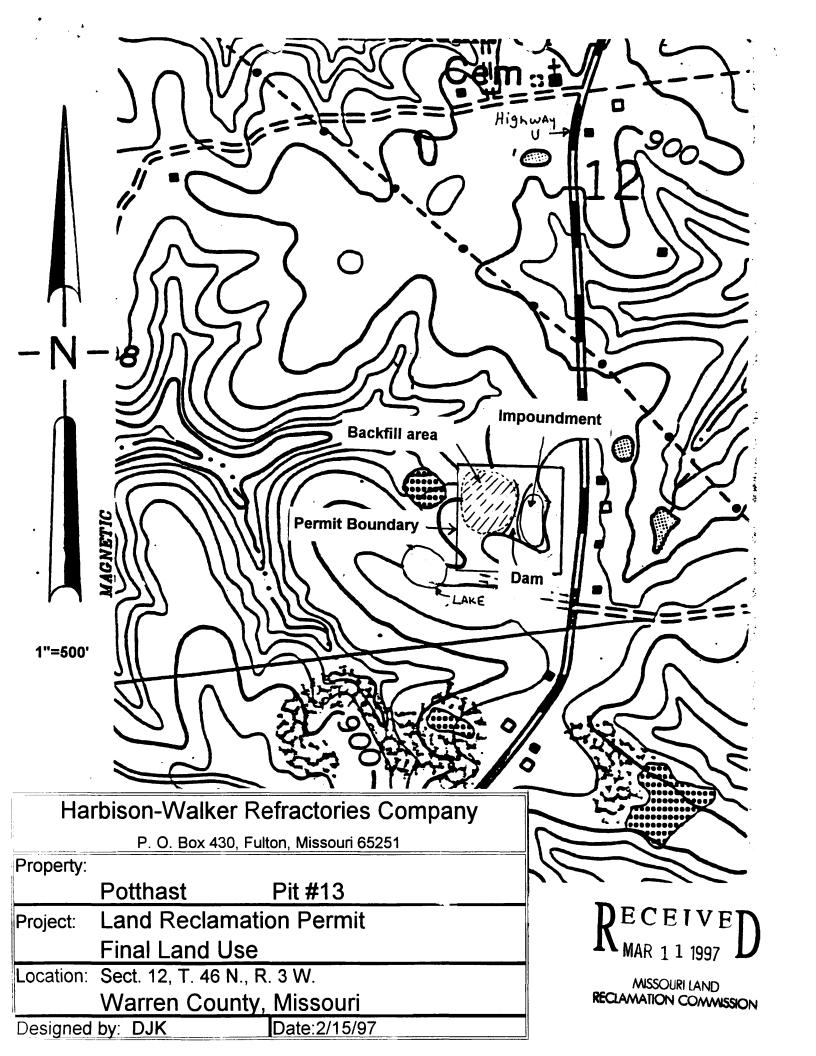
| SIGNATURE OF APPLICANT  William K. B.   | TITLE UP. M  | ingals ¥                                      | MIN)1011 DATE 3/1/97   |
|---|--|---|--|
|   | TATE TO THE SUM BEFORE ME, THIS  |   | COUNTY (OR CITY OF ST. LOUIS)  Alleanen  |
|   |  | 19 97   | USE RUBBER STAMP IN CLEAR AREA BELOW   |
|   | OTARY PUBLIC SIGNATURE MY COMMI ÉXPIRES OTARY PUBLIC NAME (TYPED OR PRINTED) | 115510N / / / / / / / / / / / / / / / / / / / | Noterial Seal<br>Kathleen S. Fuchs, Notery Public<br>Piticburgh, Allegheny County<br>My Commission Expires Nov. 29, 1997 |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED PE   | ERMIT NUMBER                                  | Member, Pennsylvania Association of Notanes  EXPIRATION DATE   |
| Maken Schil                             | 4/4/97   | 146   | 1/31/2007  |
| MO 788-1327 (12-81)                     |  | · · · · · · · · · · · · · · · · · · ·         | Page 5   |



Location: Sect. 12, T. 46 N., R. 3 W.

MISSOURI LAND RECLAMATION COMMISSION







# MISSOURI DEPARTMENT F NATURAL RESOURCES

# LAND RECLAMATION COMMISSION SITE INFORMATION FORM

MISSOURI P.A. BOX 176
RECLAMATION CITEFFERSON CITY, MO 65102

| SITE NAME OR NUMBER   |                                  | PERMIT NUMBER                          |
|---|----------------------------------|--|
| Sickendick  | ,                                | 146                                    |
| COMPANY NAME  |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                                |
| Franklin  | NW                               | 34                                     |
| TOWNSHIP  | RANGE                            | ACRES                                  |
| 43 North  | 4 West                           | 15                                     |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                  |  |
|   |                                  |  |
| MINERAL COMMODITY   |                                  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                  | ·                                      |
|   |                                  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                  |  |
| Catherine Zimmerly  |                                  |  |
| ADDRESS   |                                  |  |
| 1636 Crabapple Lane   |                                  |  |
| сту   | STATE                            | ZIP CODE                               |
| Webster Groves  | Missouri                         | 63119                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              | 1                                | DATE OF AGREEMENT                      |
|   |                                  |  |
| MINERAL DEED  | LEASE                            |  |
| WARRANTY DEED   | VERBAL AGREEM                    | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
|   |                                  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| ADDRESS   |                                  |  |
| P.O. Box 430  |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Fulton  | Missouri                         | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              | <u> </u>                         | DATE OF AGREEMENT                      |
| MINERAL DEED  | X LEASE                          | 3/9/1955                               |
| WARRANTY DEED   | VERBAL AGREEME                   | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plan |  |

# MISSOURI DEPARTMENT OF NATU RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

MO 780-1327 (12-91)



MISSOURI LAND RECLAMATION COMMISSION

Page 1

| TYPE OF PLAN (CHECK ONE):   |   |  |  |  |
|---|---|--|--|--|
| SHORT TERM, FOR ONE PERMIT YEAR   |   |  |  |  |
| X LONG TERM, FOR PERIOD THROUGH DATE: 08/01/2009  |   |  |  |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING   | SOIL, VEGETATION, AND TOPOGRAPHY            |  |  |  |
| The site is currently in brush and timber and is being used for wildlife. The pi the topography is well drained. Topsoil in the area is fair.   | t occurrs along the side of a ridge wher    |  |  |  |
|   |   |  |  |  |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |  |  |  |
|   |   |  |  |  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING   | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |  |  |  |
| 12 INCHES   | YES X NO                                    |  |  |  |
| Topsoil will be removed using rubber-tired scrapers and bulldozers. The topsoil will be stored near the pit within the permit area. We will remove the 12 inches of surficial material from all areas to be disturbed before mining or stripping begins.  DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION  Surficial material will be stored in gently sloping piles and will be seeded with annual grasses, if necessary, |   |  |  |  |
| to control any erosion.   |   |  |  |  |
|   |   |  |  |  |

| B. SPUIL                           |  |  |  |  |  |
|------------------------------------|--|--|--|--|--|
| DESCRIBE METHODS AND LOCA          | ATION OF SPOIL PLACEMENT AND DISPOSAL  |  |  |  |  |
| Spoil will be rem east of the pit. | oved using bull-dozers and rubber tired scrapers. Spoil will used to construct a dam to the  |  |  |  |  |
|                                    | DECE   |  |  |  |  |
|                                    | RECEIVED   |  |  |  |  |
|                                    | RECEIVED AUG 0 5 1998  |  |  |  |  |
|                                    | MISSOURI LAND<br>RECLAMATION COMMISSION  |  |  |  |  |
| C. ACID MATERIALS                  |  |  |  |  |  |
| DESCRIBE METHODS AND EQUI          | PMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)  |  |  |  |  |
| None                               |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    | :<br>•   |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
| PIT INFORMATION (G                 | IVE ALL DIMENSIONS IN FEET)  |  |  |  |  |
| DESCRIBE LOCATION AND ORIE         | NTATION OF PIT, IF NOT CLEAR ON SITE MAPS  |  |  |  |  |
| The pit is located                 | The pit is located in the center of the reservation and is roughly circular in plan view.  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    | !<br>!   |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
|                                    |  |  |  |  |  |
| V50 110                            |  |  |  |  |  |
| YES NO                             |  |  |  |  |  |
| X                                  | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?   |  |  |  |  |
|                                    | ;<br>  |  |  |  |  |
| X                                  | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and  |  |  |  |  |
|                                    | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet |  |  |  |  |
|                                    | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is   |  |  |  |  |
|                                    | greater, unless a variance is granted by the Commission.)  |  |  |  |  |
| X                                  | Will any excavation start at or within fifty feet (50') of any property line?  |  |  |  |  |
|                                    | (NOTE: If the answer is "yes", a safety barrier may be needed.)  |  |  |  |  |
| MO 780-1327 (12-91)                | Page 2   |  |  |  |  |

# RECLAMATION PLAN - 10 CSR 40-10.(2)(D)2. A. REVEGETATION (Attach additional sheets, if needed) REVEGETATION MIX #1 Mixture #1 Agriculture B. SEEDING OR PLANT TIME Fall

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

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MISSOURI LAND
RECLAMATION COMMISSION
utrients. Mulch

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1

| POUNDS/ACRE   | TREE OR SHRUB SPEC | CIES STEMS/ACRE                     |
|---------------|--------------------|-------------------------------------|
| 25<br>5<br>30 |                    |                                     |
|               |                    | B. SEEDING OR PLANTING TIME  Spring |
|               | 25<br>5<br>30      | 25<br>5                             |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass<br>Korean Lespedeza<br>Wheat or Oats<br>Serecea Lespedeza<br>(On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

| B. | GF | ZAL | AIC. | C |
|----|----|-----|------|---|
|    |    |     |      |   |

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

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MISSOURI LAND RECLAMATION COMMISSION

| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTI | IVITIES |
|---|---------|
|---|---------|

**GRADING** 

Grading will be done as mining advances. The spoil will be backfilled into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

## REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 13               |
| Development (residential, industrial, and recreational)                                    | 0                |
| Water impoundments (for wildlife, agricultural, or development)                            | . 2              |



By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| , \                                     |  |   |
|---|--|---|
| SIGNATURE OF APPLICANT                  | TITLE  |   |
| LLO TILLI                               | Manager- Mini  | n 🗸   |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE  | COUNTY (OR CITY OF ST. LOUIS)                         |
|   | Pennsylvania   | Allegheny   |
|   | SUBSCRIBED AND SWORN BEFORE ME, THIS   | USE RUBBER STAMP N                                    |
| ~                                       | 14th DAY OF July 19 98   | CLEAR AREA BELOW                                      |
|   | NOTARY PUBLIC SIGNATURE MY COMMISSION  |   |
|   | KATA OMA TURE EXPIRES (159/A)  |   |
|   | Muller Just  | Notarial Seal   |
|   | $\mathcal{L}(\mathcal{R}(\mathcal{R})/\mathcal{R})/\mathcal{R}\mathcal{R} = \mathcal{L}(\mathcal{R}(\mathcal{R})/\mathcal{R})/\mathcal{R}\mathcal{R} = \mathcal{L}(\mathcal{R}(\mathcal{R})/\mathcal{R})/\mathcal{R}\mathcal{R}$ | en S. Fuchs, Notary Public<br>burgh, Allegheny County |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED PERMIT NOMBER  | mission Expires Nov. 29, 2001                         |
| But Say                                 | 9-2-98 1-44  | ernsylvania Association of Notaries                   |
| MO 780/1327 (12-91)                     |  |   |

SOUTHWEST LYON

Frances K. Paggas

Sickendick Pit 4

RECEIVED AUG 0 5 1998

# Hillermann NURSERY & FLORIST, INC.

1160 West Fifth Street Washington, Missouri 63090

Den F. & Bernie A. Hillermann

(314) 239-6729



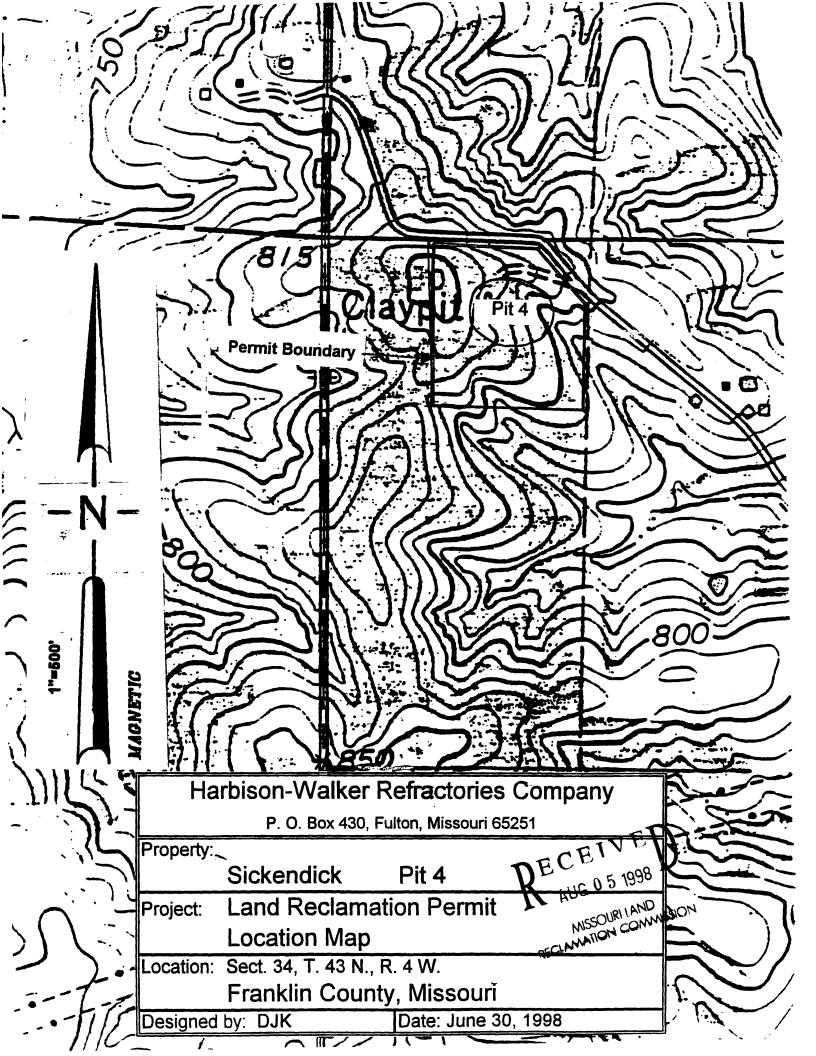


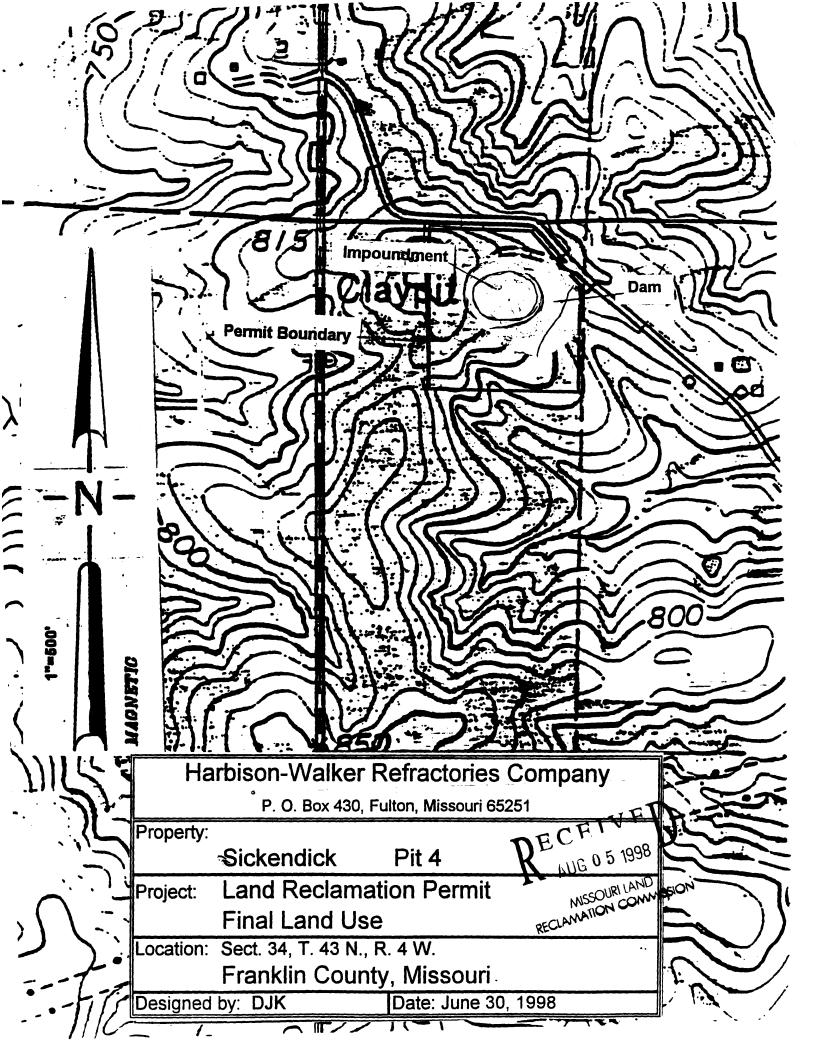


Ford 2610 Trector

Washington Tractor Co.

Highway 47 South - Washington, Missouri 239-6155





MO 780-1036 (12-91)

| To be completed for each separate area    |                    |                        |                        |
|---|--------------------|------------------------|------------------------|
| DITE NAME OH NUMBEH                       |                    | PERMIT NUMBER          |                        |
| Stockton #1 (old pit)                     |                    | 81-146-A               |                        |
| COMPANY NAME                              |                    |                        |                        |
| Harbison-Walker Refracto                  | ories, Division of | INDRESCO, Inc.         |                        |
| COUNTY                                    | 1/4 SECTION        |                        | SECTION                |
| Maries                                    | Northeast Qua      | rter                   | 1                      |
| TOWNSHIP                                  | RANGE              |                        | ACRES                  |
| 40 North                                  | 7 West             |                        | 1                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRI  | ES)                |                        |                        |
|   |                    |                        |                        |
| MINERAL COMMODITY                         |                    | ESTIMATED TONS/YEAR (F | OR GRAVEL SITES)       |
| Clay                                      |                    |                        |                        |
|   |                    |                        | DECRIVE                |
|   |                    |                        | N W                    |
| NAME OF LANDOWNER (ATTACH LIST IF MORE    | THAN ONE)          |                        | AUG 2 8 1992           |
| Anna Belle Elrod                          |                    |                        | MISSCHÄREND            |
| ADDRESS                                   |                    |                        | RECLAMATION COMMISSION |
| P.O. Box 510                              |                    |                        |                        |
| CITY                                      |                    | STATE                  | ZIP CODE               |
| Bourbon                                   |                    | Missouri               | 65441                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):      |                    |                        | DATE OF AGREEMENT      |
| MINERAL DEED                              | [                  | X LEASE                |                        |
| ☐ WARRANTY DEED                           |                    | VERBAL AGREEMENT       | August 11, 1949        |
| OTHER (DESCRIBE):                         |                    |                        |                        |
|   |                    |                        |                        |
|   |                    |                        |                        |
|   |                    |                        |                        |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE | E THAN ONE)        |                        |                        |
| Same as above                             |                    |                        |                        |
| DDRESS                                    |                    |                        |                        |
|   |                    |                        |                        |
| нтү                                       |                    | SIAIL                  | ZIP CODE               |
|   |                    |                        |                        |
| OURCE OF RIGHT TO MINE (CHECK ONE):       |                    |                        | DATE OF AGREEMENT      |
| MINERAL DEED                              |                    | LEASE                  |                        |
| WARRANTY DEED                             |                    | VERBAL AGREEMENT       |                        |
| OTHER (DESCRIBE):                         |                    |                        |                        |



P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):  |                             |   |
|--|-----------------------------|---|
| SHORT TERM, FOR ONE PERMIT YEAR  |                             |   |
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 200                        |                             |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION AND TOPOGRAPHY. | PERMITTING (BY APPLICANT OR | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION |
|  |                             |   |
| STOCKTON #1  |                             |   |
|  |                             |   |
| This plan covers a total of one acre                                     | containing one clay         | nit This site was an                        |
| abandoned prelaw clay pit which had b                                    |                             |   |
| and mined the remaining clay in the p                                    |                             |   |
| and overburden removed before we ever                                    |                             |   |
| 1990. The site sits on a ridge top s                                     |                             |   |
|  | •                           |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.                                |                             |   |
| A. TOPSOIL   |                             |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMM                 | MISSION PERMITTING          | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
|  | 0 INCHES                    | YES OR NO                                   |
|  |                             | LI YES OR ELI NO                            |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL                  | -                           |   |
| Not applicable - No topsoil saved  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             | RECEIVED                                    |
|  |                             |   |
|  |                             | AUCAA                                       |
|  |                             | AUG 2 8 1992                                |
|  |                             | AAISSCOLL                                   |
|  |                             | MISSOUGLAND<br>RECLAMATION COMMISSION       |
|  |                             | WEST AND A COMMESION                        |
|  |                             |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE                  | AND PROTECTION              |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TUPSUIL STORAGE                  | : AND PROTECTION            |   |
| Not englischlo   |                             |   |
| Not applicable.  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |
|  |                             |   |

| B. SF |                      |   |
|-------|----------------------|---|
| DESCF | IIBE METHODS         | AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
|       | There wa             | Il from the old pit was graded to traversable slopes before started mining. as no spoil produced by our mining operations. We do not plan to disturb the Il unless it is beneficial.  |
|       |                      |   |
|       | ID MATERI            |   |
| DESCR | IBE METHODS          | AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
|       | None.                |   |
|       |                      |   |
|       |                      |   |
|       |                      |   |
| 1     |                      |   |
| D. PI | T INFORMA            | TION (GIVE ALL DIMENSIONS IN FEET)  |
| DESCR | IBE LOCATION         | I AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
|       | one half<br>first cu | already stripped and partially mined before permitting. To get to the pit, go is mile north on the county road and go straight on to a private road at the arve. Go a half mile north on the private road and you're there. The pit is with a diameter of approximately 150'.   |
|       |                      |   |
| YES   | NO                   |   |
|       |                      | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|       | X                    | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|       |                      | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

MO 780-1327 (12-91)

PAGE 2 OF 5

| RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. |                              |                             |  |  |
|---|------------------------------|-----------------------------|--|--|
| A. REVEGETATION (Attach a                   | dditional sheets, if needed) |                             |  |  |
| REVEGETATION MIX #1                         | PURPOSE OR LAND USE          | B. SEEDING OR PLANTING TIME |  |  |
| Mixture #1                                  | Pasture                      | Fall or Spring              |  |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulc will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2          | Pasture             | Fall or Spi           | ring       |

# DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| Orchard Grass         | 10 |  |
|-----------------------|----|--|
| Korean Lespedeza      | 6  |  |
| Wheat or oats         | 30 |  |
| Use serecea lespedeza |    |  |
| on slopes.            | 20 |  |

## **B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

All areas which were redisturbed by our mining will be graded to traversable slopes. An impoundment will be left by the mined out pit. Terraces and diversion ditches will be constructed as necessary to increase the watershed of the impoundment and decrease runoff.

# C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

The site has already been graded to traversable slopes. Any additional grading for terraces and ditches will be completed by 1994.

## REPLACEMENT OF TOPSOIL

None. A suitable substitute will be used as topsoil.

### REVEGETATION

The area will be seeded the first Spring or Fall after final grading.

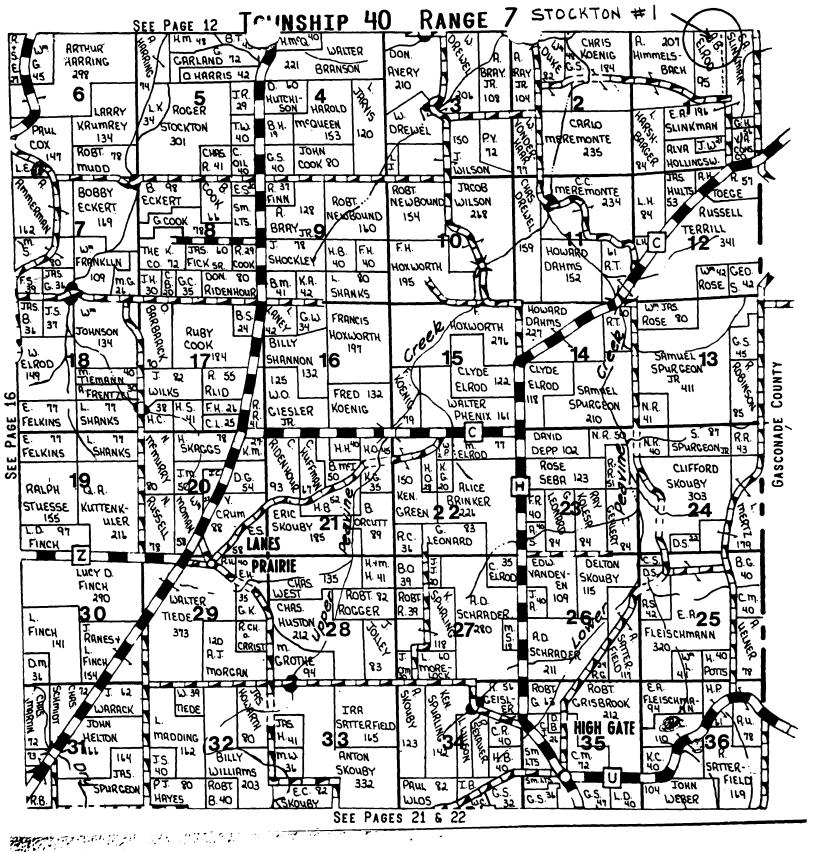
AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

| D. USE OF LAND WHEN RECLAIMED                                   | ESTIMATED ACRES: |
|---|------------------|
| Estimate acreage of each land use below, after reclamation      | ESTIMATED ACRES. |
| Wildlife (forest or other habitat with livestock excluded)      |                  |
| Agricultural (pasture, cropland, and horticultural)             | 0.5              |
| Development (residential, industrial, and recreational)         |                  |
| Water impoundments (for wildlife, agricultural, or development) | 0.5              |

# By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT      |                                    | TITLE                       | DATE                                     |
|-----------------------------|------------------------------------|-----------------------------|--|
| Jeffrey P. Jahn             | Wif Inl                            | Manager-<br>Mining & Explor | eation 8/11/52                           |
| NOTARY PUBLIC EMBOSSER SEAL | SUBSCRIBED AND SWORN BEFORE ME, TH | ue                          | COUNTY (OR CITY OF ST. LOUIS)  Allegheny |
|                             | 17th DAY OF aug                    | ,                           | USE RUBBER STAMP IN CLEAR AREA BELOW     |
|                             | Loretta M. Dottschlin              | MY COMMISSION               |  |
|                             | LOYPETA M. GOTTSCI                 | hlina                       |  |
| APPROVED BY (DIRECTOR'S REP | RESENTATIVE)                       | DATE APPROVED               | PERMIT NUMBER                            |



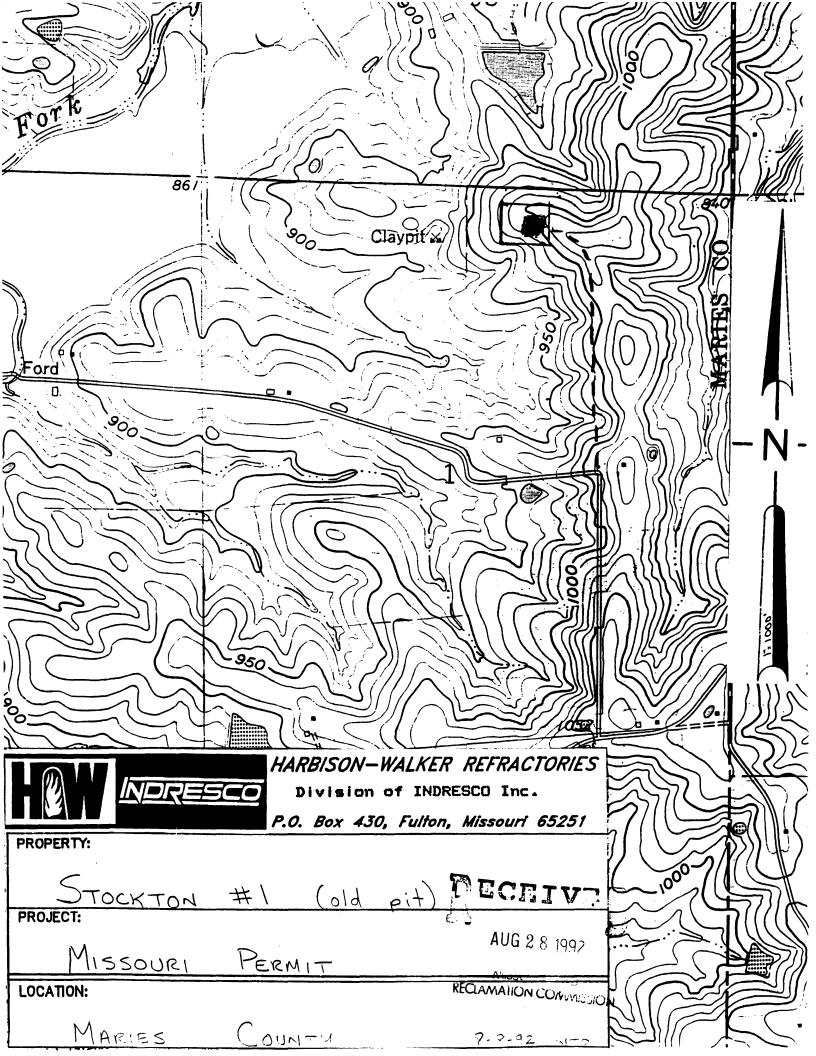
stockton # ]

Maria



AUG 2 8 1992

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MISSOURI DEPARTMENT ANATURAL RESOUR ES AUG 0 5 1998

**LAND RECLAMATION COMMISSION** 

**SITE INFORMATION FORM** 

P.O. BOX 176
MISSOURI LAND JEFFERSON CITY, MO 65102
RECLAMATION COMMISSION

| SITE NAME OR NUMBER   | 1                                | PERMIT NUMBER                          |
|---|----------------------------------|--|
| Tucker  |                                  | 146                                    |
| COMPANY NAME  |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                                |
| Lincoln   | sw                               | Lot M-6                                |
| TOWNSHIP  | RANGE                            | ACRES                                  |
| U.S. Survey 1710, T. 51 N.  | 1 West                           | 24                                     |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        | <u> </u>                         |  |
|   |                                  |  |
| MINERAL COMMODITY   |                                  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                  |  |
|   |                                  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                  |  |
| Charles Finnerty  |                                  |  |
| ADDRESS   |                                  |  |
| 27830 Highway WW  |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Eolia   | Missouri                         | 63344                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              | <u></u>                          | DATE OF AGREEMENT                      |
| MINERAL DEED  | LEASE                            |  |
| MINERAL DEED  |                                  |  |
| WARRANTY DEED   | VERBAL AGREEME                   | ENI                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
|   |                                  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| ADDRESS   |                                  |  |
| P.O. Box 430  | ·                                |  |
| CITY  | STATE                            | ZIP CODE                               |
| Fulton  | Missouri                         | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                  | DATE OF AGREEMENT                      |
| X MINERAL DEED  | LEASE                            | 11/15/12                               |
| WARRANTY DEED   | VERBAL AGREEME                   | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plan | ·                                      |

# MISSOURI DEPARTMENT OF NATULE RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MIN



PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES MISSOURI LAND TYPE OF PLAN (CHECK ONE): RECLAMATION COMMISSION SHORT TERM, FOR ONE PERMIT YEAR X LONG TERM, FOR PERIOD THROUGH DATE: 08/01/2009 DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY. The site is currently being used for row crops. The pit occurrs in a field where the topography is gently slopeing. Topsoil in the area is good. OPERATION PLAN - 10 CSR 40-10.020(2)(D)1. AVERAGE DEPTH OF TOPSOIL. PRIOR TO LAND RECLAMATION COMMISSION PERMITTING IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? YES X NO 12 **INCHES** DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL Topsoil will be removed using rubber-tired scrapers and bulldozers. The topsoil will be stored near the pit within the permit area. We will remove the 12 inches of surficial material from all areas to be disturbed before mining or stripping begins. DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION Surficial material will be stored in gently sloping piles and will be seeded with annual grasses, if necessary, to control any erosion.

B. SPOIL DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL MISSOURI LAND Spoil will be removed using bull-dozers and rubber tired scrapers. Spoil will be backfilled and his file of the species and rubber tired scrapers. C. ACID MATERIALS DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW) None PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET) DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS YES NO Will any excavation be at or within fifty feet (50') of the right-of-way of any public road? Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet

or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is

greater, unless a variance is granted by the Commission.)

Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)

MO 780-1327 (12-91)

|  | <u> </u>                   | ECELVE           | D                        |  |
|--|----------------------------|------------------|--------------------------|--|
| RECLAMATION PLAN - 10 CSR 40-10.0        | (D)2.                      | AUG 0 5 1998     | U                        |  |
| A. REVEGETATION (Attach additional sheet | s, if needed)              |                  |                          |  |
| REVEGETATION MIX #1                      | PURPOSE OR LAND USE        | MISSOURI LAND    | B. SEEDING OR PLANT TIME |  |
| Mixture #1                               | Agriculture <sup>REC</sup> | CLAMATION COMMIS | SION<br>Fall             |  |
|  |                            |                  |                          |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPE | CIES STEMS/ACRE             |
|--|---------------|-------------------|-----------------------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                   |                             |
| VEGETATION MIX #2                          | PURPOSE       | OR LAND USE       | B. SEEDING OR PLANTING TIME |
| Mixture #2                                 | Agricultur    | e                 | Spring                      |

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

## B. GRADING

RECEIVED AUG 0 5 1998

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

MISSOURI LAND

Areas backfilled with spoil from the site will be graded to match the surroundified to be by the final phase of mining.

The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

| C. | DESCRIBE | THE GENERAL | SEQUENCE AND | TIMING OF T | THE FOLLOWING | ACTIVITIES |
|----|----------|-------------|--------------|-------------|---------------|------------|
|----|----------|-------------|--------------|-------------|---------------|------------|

**GRADING** 

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland and horticultural)   | 21               |
| Development (residential, industrial, and recreational)                                    | 0                |
| Water impoundments (for wildlife, agricultural, or development)                            | 3                |



By my signature, I attest to the following:

MISSOURI LAND
RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  |                                 | Manager- Mini  | \n q /   |
|---|---------------------------------|----------------|--|
| NOTARY PUBLIC EMBOSSER SEAL             | STATE                           | 0              | COUNTY (OR CITY OF ST. LOUIS)  |
|   | Pennsylvania                    |                | Allegheny  |
|   | SUBSCRIBED AND SWORN BEFORE M   | E, THIS        | USE RUBBER STAMP IN  |
| ~                                       | 14th DAY OF July                | 19 98          | CLEAR AREA BELOW   |
|   | NOTARY PUBLIC SIGNATURE         | MY COMMISSION/ |  |
|   | Kathler S. Tuc                  | EXPIRES (1591) | Notarial Seal<br>Kathleen S. Fuchs, Notary Public  |
|   | NOTARY PUBLIC NAME (TYPED OR PR | FILENC         | Pittsburgh, Allegheny County y Commission Expires Nov. 29, 2001 mbpr. Pennsylvania Association of Notaries |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPR                       |                |  |
| But beg                                 | 9-2-                            | -98. 146       |  |
|   |                                 |                |  |



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## CLIFFORD BANKING COMPANY

Clarksville, Missouri 63336

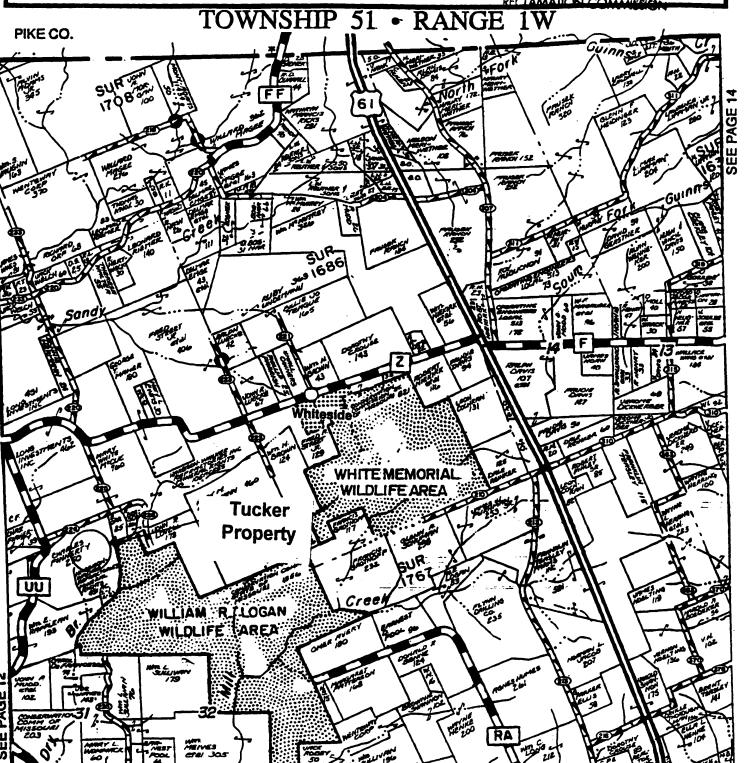
242-3517

CLIFFORD BANKING CO. FACILITY Eolia, Missouri 63344 485-7171

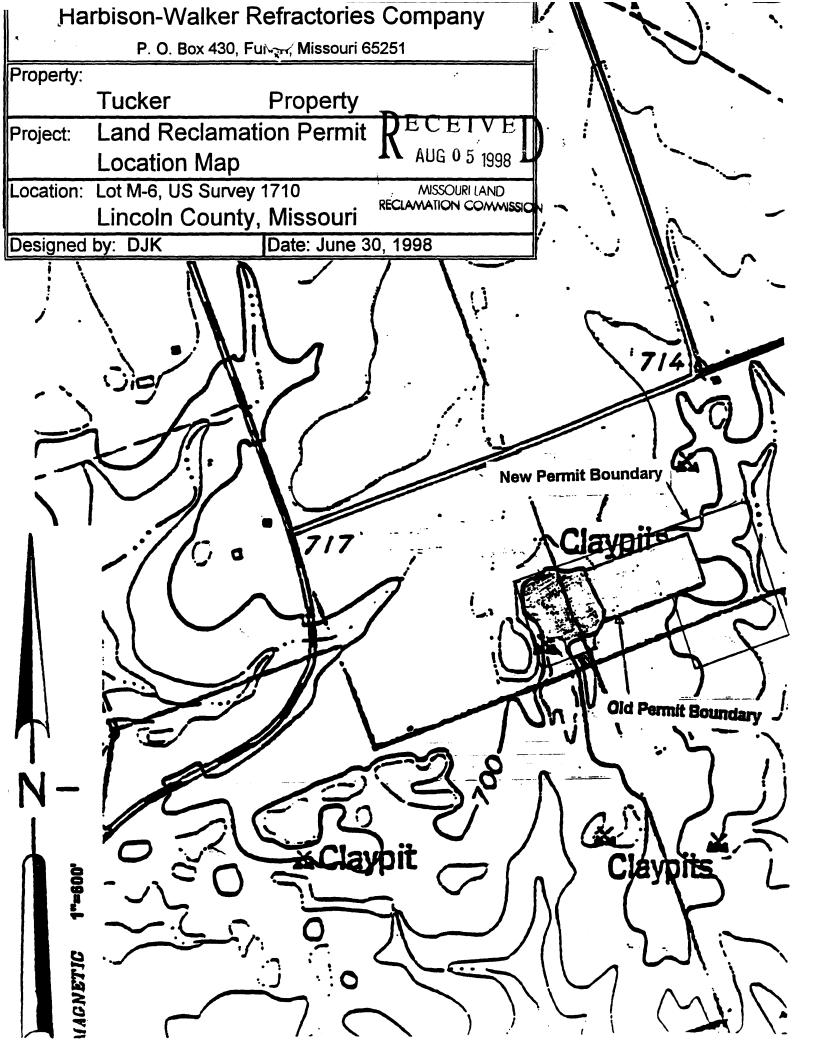


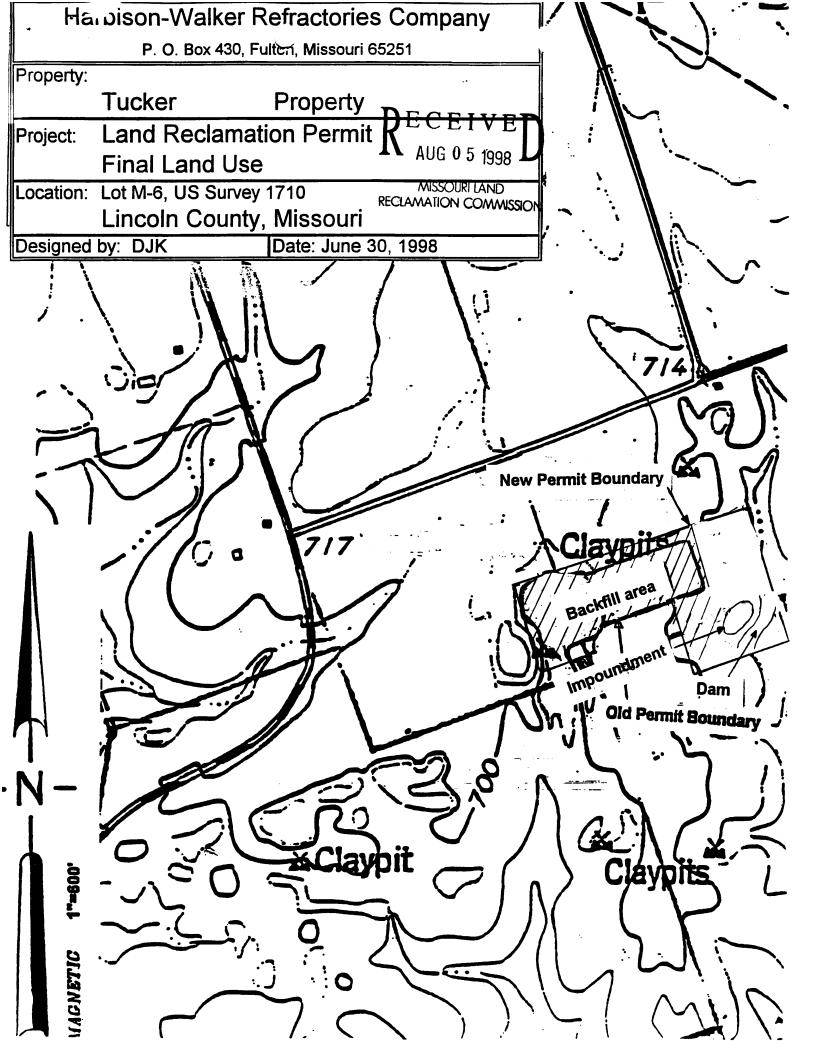
MISSOURI LAND

13



**SEE PAGE 18** 







# MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION SITE INFORMATION FORM

MISSOURHANDOX 176
RECLAMATION GENERALISSON CITY, MO 65102

| SITE NAME OR NUMBER   |                                       | PERMIT NUMBER                          |
|---|---------------------------------------|--|
| Uptergrove  | •                                     | 146                                    |
| COMPANY NAME  |                                       |  |
| Harbison-Walker Refractories Company                              |                                       |  |
| COUNTY  | 1/4 SECTION                           | SECTION                                |
| Lincoln   | N/A                                   | Lot L-1                                |
| TOWNSHIP  | RANGE                                 | ACRES                                  |
| U.S. Survey 1710, T. 51 N.  | 1W                                    | 14                                     |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                       |  |
|   |                                       |  |
| MINERAL COMMODITY   |                                       | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                       |  |
|   |                                       |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                | 1                                     |  |
| Charles Finnerty  |                                       |  |
| ADDRESS   |                                       |  |
| 27830 Highway WW  |                                       |  |
| CITY  | STATE                                 | ZIP CODE                               |
| Eolia   | Missouri                              | 63344                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                       | DATE OF AGREEMENT                      |
| MINERAL DEED  | LEASE                                 |  |
| WARRANTY DEED   | VERBAL AGREEMI                        | ENT                                    |
| OTHER (DESCRIBE):   |                                       |  |
|   |                                       |  |
|   |                                       |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               | , , , , , , , , , , , , , , , , , , , |  |
| Harbison-Walker Refractories Company                              |                                       |  |
| ADDRESS   |                                       |  |
| P.O. Box 430  |                                       |  |
| СІТУ  | STATE                                 | ZIP CODE                               |
| Fulton  | Missouri                              | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE);                              |                                       | DATE OF AGREEMENT                      |
| X MINERAL DEED  | LEASE                                 | 3/10/41                                |
| WARRANTY DEED   | VERBAL AGREEM                         | ENT                                    |
| OTHER (DESCRIBE):   |                                       |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plar      | <br>1.                                 |
|   |                                       |  |

# MISSOURI DEPARTMENT OF NATUR.... RESOURCES LAND RECLAMATION COMMISSION PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

MO 780-1327 (12-91)



Page 1

|   |   | MISSOURI LAND                               |
|---|---|---|
| TYPE OF PLAN (CHECK ONE):   |   | RECLAMATION COMMISSION                      |
| SHORT TERM, FOR ONE PERMIT YEAR   |   |   |
| X LONG TERM, FOR PERIOD THROUGH DATE:   | <u>8/1/2009</u>                               |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING   | G (BY APPLICANT OR PRIOR OPERATOR), INCLUDING | SOIL, VEGETATION, AND TOPOGRAPHY.           |
| This site is currently being used for cattle pa   | asture. The topography is flat and            | the topsoil is good.                        |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
|   |   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |   |
|   |   |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM   | MISSION PERMITTING                            | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 12  | INCHES  | YES X NO                                    |
|   |   |   |
| Topsoil will be removed using rubber-tired some ar the pit within the permit area. We will disturbed before mining or stripping begins. | remove the 12 inches of surficial             |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE   | SE AND PROTECTION                             |   |
| Surficial material will be stored in gently slo to control any erosion.   | ping piles and will be seeded with            | annual grasses, if necessary,               |
|   |   | 1   |
|   |   |   |
|   |   | ·• .  |
|   |   |   |
|   |   |   |
|   |   |   |

| DESCRIBE METHOD       | S AND LOCAT | TION OF SPOIL PLACEMENT AND DISPOSAL  |
|-----------------------|-------------|---|
| Spoil wil<br>in succe | II be remo  | ved using bull-dozers and rubber tired scrapers. Spoil will be backfilled as mining progresses ses.   |
|                       |             | DECEIVED  |
|                       |             | RECEIVED AUG 0 5 1998   |
|                       |             | AUG 0 5 1998 D  |
|                       |             | MISSOURI LAND RECLAMATION COMMISSION  |
| C. ACID MAT           | ERIALS      |   |
| DESCRIBE METHODS      | S AND EQUIP | MENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)  |
| None                  |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
| PIT INFORMA           | TION (GIV   | VE ALL DIMENSIONS IN FEET)  |
|                       | <del></del> | TATION OF PIT, IF NOT CLEAR ON SITE MAPS  |
| <b>T</b> t            |             |   |
| i ne pit is           | s located i | n the center of the field along Missouri Route UU. The pit is oblong in plan view.  |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
|                       |             |   |
| YES                   | NO          |   |
|                       | X           | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
| ا لــا                |             | validatily excavation be at or within tilty reet (50 ) or the hight-or-way or any public road?  |
|                       |             |   |
| L l                   | X           | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public_toad? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may |
|                       |             | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|                       |             | or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)  |
|                       |             | greater, unless a variance is granted by the Continussion.)   |
|                       | X           | Will any excavation start at or within fifty feet (50') of any property line?   |
|                       |             | (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
| MO 780-1327 (12-91)   |             |   |

B. SPOIL

| RECLAMATION PLAN - 10 CSR 40-10.025(2)    | (D)2.               | RECEIO!          |                          |
|---|---------------------|------------------|--------------------------|
| A. REVEGETATION (Attach additional sheets | s, if needed)       | AUG 0 5 1998     | 3 9                      |
| REVEGETATION MIX #1                       | PURPOSE OR LAND USE | MISSOURI LAND    | B. SEEDING OR PLANT TIME |
| Mixture #1                                | Agriculture         | RECLAMATION COMM |                          |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------|-----------------------|------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |            |
|  |               |                       |            |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Agriculture         | Spring                      |

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

#### B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

RECEIVED AUG 0 5 1998

MISSOURI LAND RECLAMATION COMMISSION

## C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and buildozers within one year after grading is complete.

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 12               |
| Development (residential, industrial, and recreational)                                    | 0                |
| Water impoundments (for wildlife, agricultural, or development)                            | 2                |



By my signature, I attest to the following:

MISSOURI LAND
RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  |                       | TITLE             |                       |          |   | İ       |
|---|-----------------------|-------------------|-----------------------|----------|---|---------|
| With The W                              |                       | Man               | ager- Mini            | ังร      |   |         |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE                 |                   | I                     | <i>*</i> | COUNTY (OR CITY OF ST. LOUIS)   | ]       |
|   | Pennsylva             | uia               |                       | 0        | Allegheny   |         |
|   | SUBSCRIBED AND SWOR   | N BEFORE ME, THIS |                       |          | USE RUBBER STAMP IN   |         |
| ~                                       | 14 DAY OF             | July              | 19 98                 |          | CLEAR AREA BELOW  |         |
|   | NOTARY PUBLIC SIGNAT  | $1 \land 2 $      | MY COMMISSION EXPIRES |          |   |         |
|   | Juliun A              | TUCA              | 1901101               | Ш        | Notarial Seal   |         |
|   | NOTARY BUBLIC NAME (1 | TYPED OR PRINTED) | hs                    | Му       | Kathleen S. Fuchs, Notary Publ<br>Pittsburgh, Allegheny County<br>Commission Expires Nov. 29. 2 | 2001    |
| AFFROYED DI (DIRECTOR O REFRESENTATIVE) |                       | DATE APPROVED     | PERMIT NUMBER         | Mem      | ber, Pennsylvania Association of N  | otaries |
| best de                                 |                       | 9-21-91           | 06/)                  | 4        | /   |         |



## CLIFFORD BANKING COMPANY

Clarksville, Missouri 63336-242-3517

ECEIVEDE AUG 0 5 199

13

Since 1871

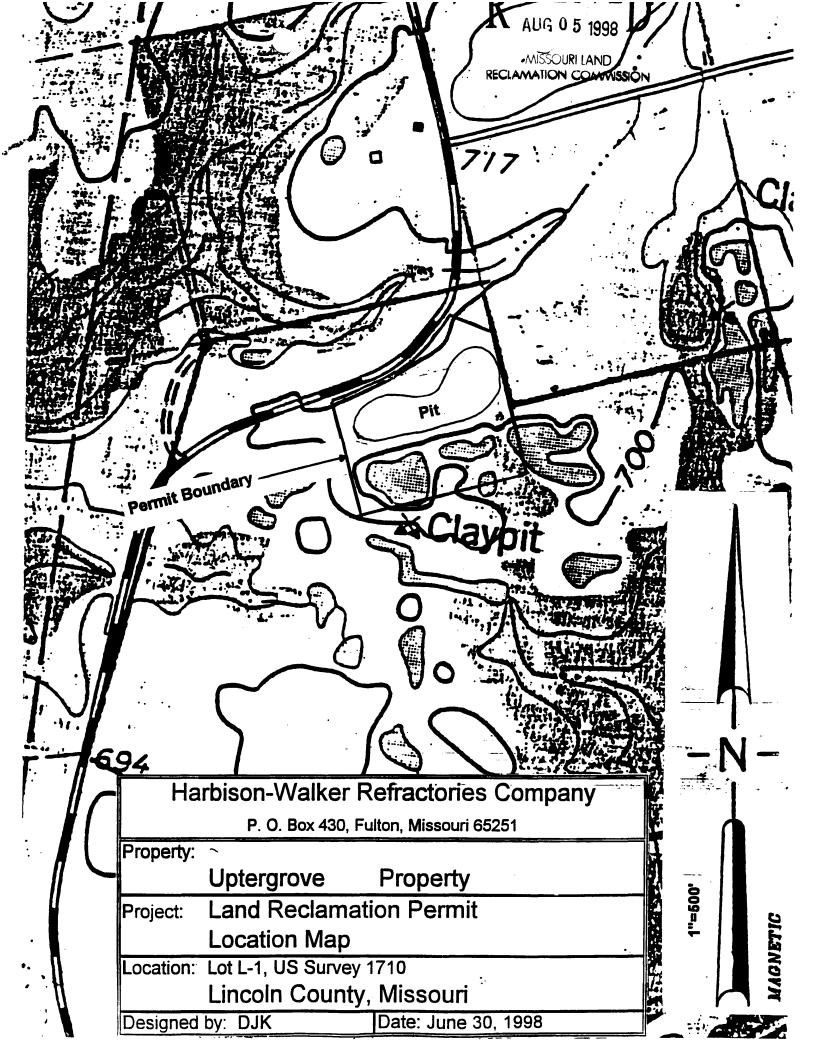
© 1989 Mull Map Service

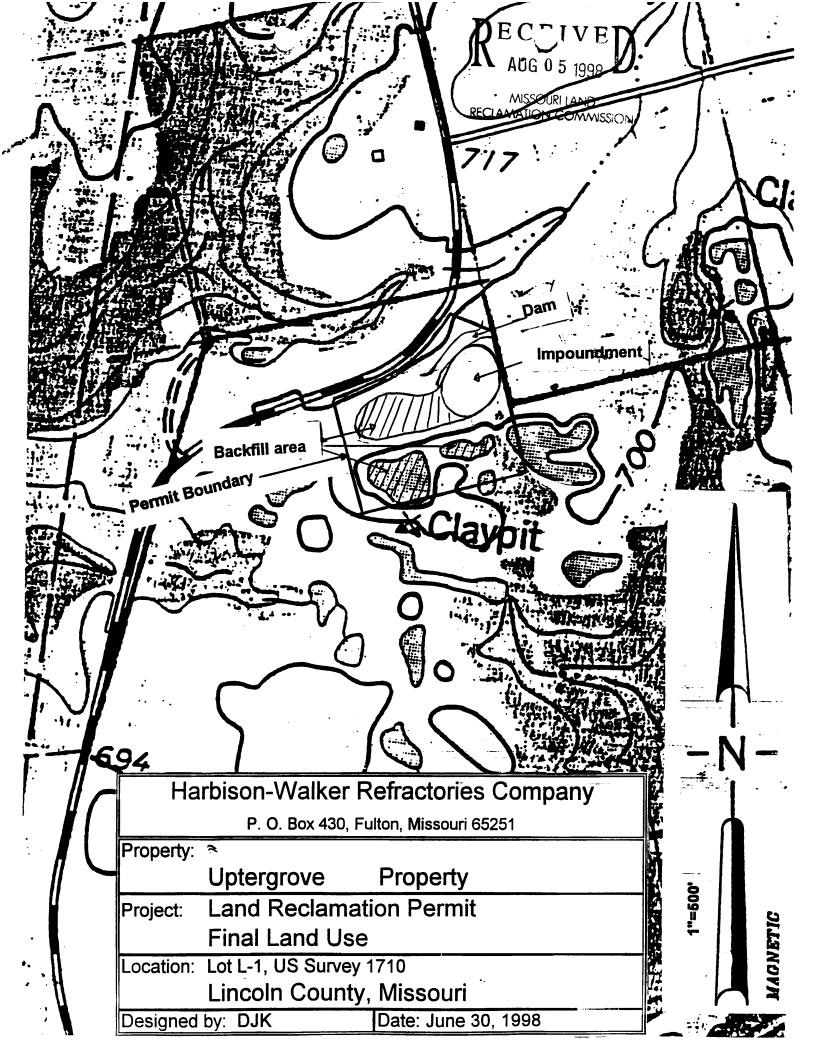
CLIFFORD BANKING CO. FACILITY Eolia, Missouri 63344 485-7171

MISSOURI LAND
RECLAMATION COMMESION

**RANGE** PIKE CO. 1686 /hiteside WHITE MEMORIAL WILDLIFE AREA **Uptergrove Property** WILLIAM RILOGAN WILDLIFE AREA

**SEE PAGE 18** 





MISSOURI DEPARTMENT NATURAL RESOURCES AUG 1998

LAND RECLAMATION COMMISSION

**SITE INFORMATION FORM** 

MISSOURI LANDO. BOX 176
RECLAMATION COMMISSION CITY, MO 65102

| SITE NAME OR NUMBER   |                                  | PERMIT NUMBER                          |
|---|----------------------------------|--|
| Weant   |                                  | 146                                    |
| COMPANY NAME  |                                  |  |
| Harbison-Walker Refractories Company                              |                                  |  |
| COUNTY  | 1/4 SECTION                      | SECTION                                |
| Montgomery  | sw                               | 8                                      |
| TOWNSHIP  | RANGE                            | ACRES                                  |
| 48 North  | 5 West                           | 13                                     |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                  |  |
|   |                                  |  |
| MINERAL COMMODITY   |                                  | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                  |  |
|   |                                  |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                  |  |
| John Weant  |                                  |  |
|   |                                  |  |
| Route 1 Box 50G   |                                  |  |
|   | STATE                            | ZIP CODE                               |
| Moberly   | Missouri                         | 65270                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              | WIISSOUT                         | DATE OF AGREEMENT                      |
| SOURCE OF RIGHT TO MINE (CHECK ONE).                              |                                  |  |
| MINERAL DEED  | LEASE                            |  |
| WARRANTY DEED   | VERBAL AGREEME                   | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
|   |                                  |  |
|   |                                  |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                  | · · · · · · · · · · · · · · · · · · ·  |
| Harbison-Walker Refractories Company                              |                                  |  |
| ADDRESS   |                                  |  |
| P.O. Box 430  |                                  |  |
| CITY  | STATE                            | ZIP CODE                               |
| Fulton  | Missouri                         | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                  | DATE OF AGREEMENT                      |
|   | <b></b>                          | 0/4/4000                               |
| MINERAL DEED  | X LEASE                          | 6/4/1996                               |
| WARRANTY DEED   | VERBAL AGREEME                   | ENT                                    |
| OTHER (DESCRIBE):   |                                  |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plan |  |
|   | , h h                            |  |



Second Landowner:

Kenneth Weant 3420 Viscount Drive Arlington, TX 76016

## MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION

MO 780-1327 (12-91)



Page 1

## PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

|   |  | MISSOURI LAND                                  |
|---|--|--|
| TYPE OF PLAN (CHECK ONE):   |  | RECLAMATION COMMISSION                         |
| SHORT TERM, FOR ONE PERMIT YEAR   |  |  |
| X LONG TERM, FOR PERIOD THROUGH DATE:   | 08/01/2009                             |  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTIN  | G (BY APPLICANT OR PRIOR OPERATOR), II | NCLUDING SOIL, VEGETATION, AND TOPOGRAPHY.     |
| The site is currently in brush and timber and topography is relatively flat. Topsoil in the   | _                                      | The pit occurrs along the ridge line where the |
|   |  | •  |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |  |  |
|   |  |  |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM   | IMISSION PERMITTING                    | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?    |
| 12  | INCHES                                 | YES X NO                                       |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOV.  | AL                                     |  |
| Topsoil will be removed using rubber-tired some near the pit within the permit area. We will disturbed before mining or stripping begins. | remove the 12 inches of su             |  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE   | OF AND PROTECTION                      |  |
| Surficial material will be stored in gently slo<br>to control any erosion.  |  | ed with annual grasses, if necessary,          |
| ~   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |
|   |  |  |

| B. SPOIL             |   |   |
|----------------------|---|---|
| DESCRIBE METHODS AN  | ID LOCATION OF SPOIL PLACEMENT AND DISPOSAL           |   |
| Spoil will be        | e removed using bull-dozers and rubber tired s        | crapers. Spoil will be backfilled as mining progresses.   |
|                      |   |   |
|                      |   | •   |
|                      |   | DECEIVE   |
|                      |   | K WED   |
|                      |   | RECEIVED  |
|                      |   | MISSOURI LAND RECHAMATION COMMISSION  |
| C. ACID MATER        | IALS  | NEC PARATION COMMISSION   |
| DESCRIBE METHODS AN  | ID EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NON |   |
| None                 |   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
|                      |   | :   |
|                      |   |   |
| PIT INFORMATION      | ON (GIVE ALL DIMENSIONS IN FEET)                      |   |
| DESCRIBE LOCATION AN | ID ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS      |   |
| The pits are         | e located along the center line of the ridge and      | are irreglularly shaped in plan view.   |
| •                    | Ţ Ţ   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
|                      |   |   |
| VEC. NO              |   |   |
| YES NO               | ,   |   |
| x                    | Will any excavation be at or within fifty feet (50')  | of the right-of-way of any public road?   |
|                      |   |   |
| X                    |   | naterials be left within fifty feet of the right-of way of and  |
|                      |   | rials left in place, a slope of no more than forty degrees may the excavation be closer to the right of way than fifty feet |
|                      |   | mes the depth of unconsolidated material, whichever is  |
|                      | greater, unless a variance is granted by the Cor      | nmission.)  |
| X                    | Will any excavation start at or within fifty feet (5  | 0') of any property line?   |
|                      | (NOTE: If the answer is "yes", a safety barrier n     | nay be needed.)   |

٠.

| RECLAMATION PLAN - 10 CSR 40-10. (2)(D)2. |                                    |                          |  |
|---|------------------------------------|--------------------------|--|
| A. REVEGETATION (Attach addit             | ional sheets, if needed)           |                          |  |
| REVEGETATION MIX #1                       | PURPOSE OR LAND USE                | B. SEEDING OR PLANT TIME |  |
| Mixture #1                                | Agriculture                        | Fall                     |  |
| DESCRIBE METHODS AND EQUIPMENT            | TO BE USED FOR SEEDING OR PLANTING |                          |  |

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand. DECFIVE

MISSOURI LAND

ONESIMMOS NOITEMALDER

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------|-----------------------|------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |            |
|  |               |                       |            |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Agriculture         | Spring                      |

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of sil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------------|-----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) | 10<br>6<br>30<br>20 |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

| R | GE | λί | NIC | C |
|---|----|----|-----|---|

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Two impoundments will be left by the final phase of mining. The impoundments will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

RECEIVED AUG 0 5 1998

MISSOURI LAND
REGIAMATION COMMISSION

## C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances. The spoil will be backfilled into a draw to the west of the pit to form a lake. Some of the spoil will be used to form an impoundment in the pit. All slopes will be graded to traversable slopes within a year of disturbance.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |  |
|--|------------------|--|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |  |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |  |
| Agricultural (pasture, cropland, and horticultural)  | 7                |  |
| Development (residential, industrial, and recreational)                                    | 0                |  |
| Water impoundments (for wildlife, agricultural, or development)                            | 6                |  |

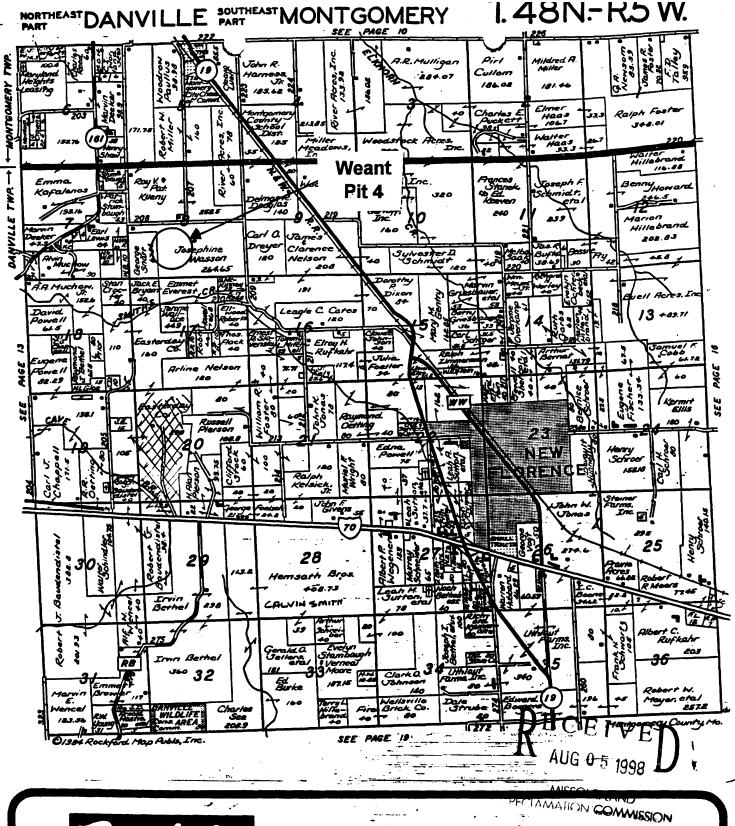
J RECEIVED AUG 0 5 1998 D

By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| \ \ \                                   |                     |                     |                          |  |          |
|---|---------------------|---------------------|--------------------------|--|----------|
| SIGNATURE OF APPLICANT                  |                     | Mana                | iser-Min                 | ing  |          |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE<br>Pennsylva  | ania                | <i>J</i>                 | COUNTY (OR CITY OF ST. LOUIS) Allegheny  |          |
|   | SUBSCRIBED AND SWO  | ORN BEFORE ME, THIS | 19 9 8                   | USE RUBBER STAMP IN<br>CLEAR AREA BELOW  |          |
|   | NOTARY PUBLIC SIGNA | TURE MY CO          | OMMISSION<br>ES //K a a/ |  | <i>)</i> |
|   | NOTARY PUBLIC NAME  | (TYPED OR PRINTED)  | h(                       | Notarial Seal<br>Kathleen S. Fuchs, Notary P<br>Pittsburgh, Allegheny Cour<br>My Commission Expires Nov. 2 | tv       |
| APPROVED BY (DIRECTOR & REFRESENTATIVE) | 1 A 1-17            | DATE APPROVED       | PERMIT NUMBER            | Member, Pennsylvania Association o   |          |
| Ball Her-                               |                     | 9-2-98              | 14(:                     |  |          |





PHONE: (314) 564-3773 or Home: (314) 564-3173

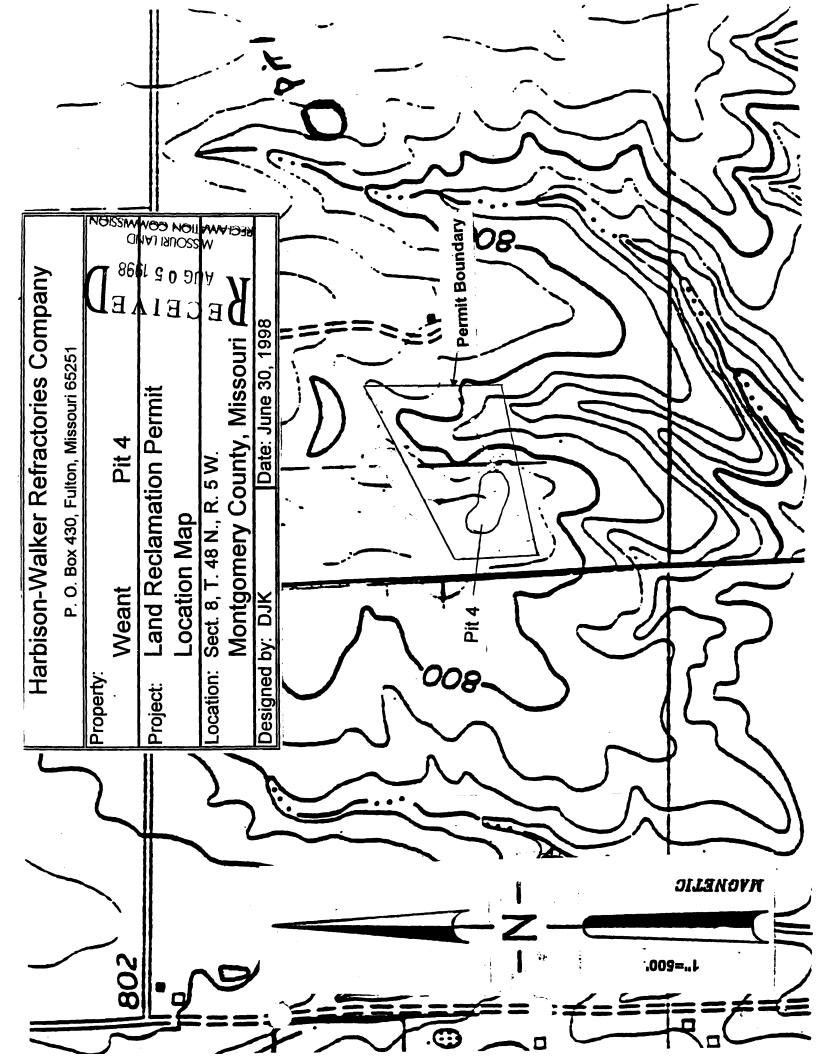
114 NORTH STURGEON STREET MONTGOMERY CITY, MISSOURI 63361

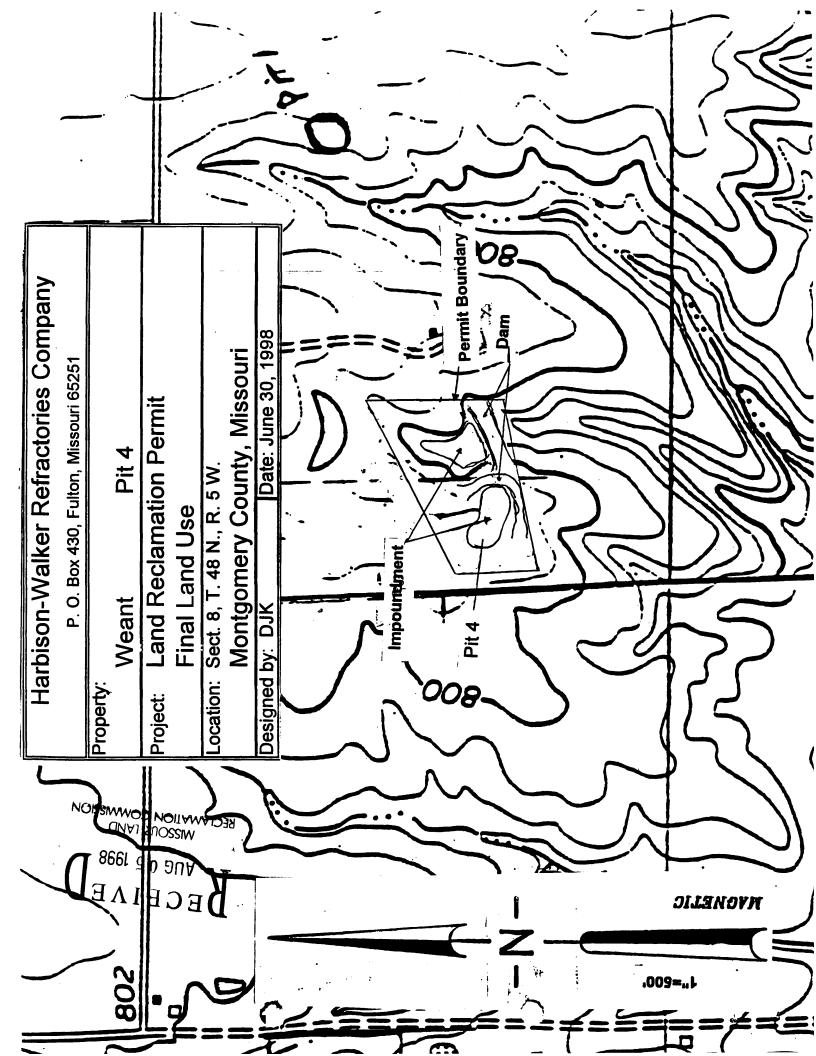


DALE A. BORCHELT

FARMS — HOMES — APPRAISALS RECREATIONAL AND COMMERCIAL PROPERTY







|  | e area or disturbance assoc | iated with mining operatio | ns.                    |
|--|-----------------------------|----------------------------|------------------------|
| SITE NAME OR NUMBER                                    |                             | PERMIT NUMBER              |                        |
| Wetherell, Wetherell #1                                | & #2                        | 79-146-A1, 81-             | -146, 82-146, 83-146   |
| COMPANY NAME   |                             |                            |                        |
| Harbison-Walker Refract                                | ories, a division of        | INDRESCO, Inc.             |                        |
| COUNTY   | 1/4 SECTION                 |                            | SECTION                |
| Callaway   | Southeast Q                 | uarter                     | 7                      |
| TOWNSHIP   | RANGE                       |                            | ACRES                  |
| 46 North   | 9 West                      |                            | 11                     |
| RIVER OR STREAM NAME (FOR IN-STREA                     | M ACRES)                    |                            |                        |
| ,  | •                           |                            |                        |
| MINERAL COMMODITY                                      |                             | ESTIMATED TONS/YEAR (      | FOR GRAVEL SITES)      |
| Clay   |                             |                            | •                      |
|  | ·                           |                            | BECT                   |
|  |                             |                            | DECEIVED               |
| NAME OF LANDOWNER (ATTACH LIST IF                      |                             | •                          | 6)                     |
| Robert C. and Mary Clev                                | enger<br>                   |                            | AUG 2 8 1992           |
| ADDRESS  |                             |                            | Chira indocalw         |
| Route 3, Box 360                                       |                             |                            | RECLAMATION COMMISSION |
| CITY   |                             | STATE                      | ZIP CODE               |
| Pleasant Hill  |                             | Missouri                   | 64080                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE                     | E):                         |                            | DATE OF AGREEMENT      |
| MINERAL DEED   |                             | X LEASE                    | 11/29/77               |
| WARRANTY DEED  |                             | VERBAL AGREEMENT           |                        |
| OTHER (DESCRIBE):                                      |                             |                            |                        |
|  |                             |                            |                        |
|  |                             |                            |                        |
| MINERAL RIGHTS OWNER (ATTACH LIST                      | IF MORE THAN ONE)           |                            |                        |
|  |                             |                            |                        |
| ADDRESS  |                             |                            |                        |
|  |                             |                            | "                      |
|  |                             | STATE                      | ZIP CODE               |
| CITY   |                             |                            |                        |
| CITY   |                             | }                          | 1                      |
|  | E):                         |                            | DATE OF AGREEMENT      |
| CITY  SOURCE OF RIGHT TO MINE (CHECK ONE  MINERAL DEED | E):                         | LEASE                      | DATE OF AGREEMENT      |
| SOURCE OF RIGHT TO MINE (CHECK ONE                     | E):                         | LEASE VERBAL AGREEMENT     | DATE OF AGREEMENT      |



## MISSOURI DEPARTME—OF NATURAL RESOURCES LAND RECLAMATION COMMISSION MINE PLAN



P.O. BOX 176 JEFFERSON CITY, MO 65102

| TYPE OF PLAN (CHECK ONE):  SHORT TERM, FOR ONE PERMIT YEAR   |   |
|--|---|
| LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2002   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR AND TOPOGRAPHY. | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION |
| WETHERELL  |   |
| This plan covers an area of approximately 11 acres total.  | This property had been                      |
| previously mined by H. K. Porter before the 1972 law. The  | ey mined extensively in the                 |
| area west and south of our Pit l. There is also an old cl  | lay pit which borders Pit 1 on              |
| the east and Pit 2 on the north side. The land which is r  | now Pit l was a wooded,                     |
| gently sloping area bordering Snyder Creek. Pit 2 was a w  | vooded hillside with slopes                 |
| of 5 to 10 percent. The topsoil is fairly rich especially  | near the creek.                             |
|  |   |
|  |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |   |
| A. TOPSOIL   |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING                            | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 6 - 12 INCHES  | YES OR X NO                                 |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |   |
| Already reclaimed. Not applicable.   |   |
| nareday rectaimed. Not applicable.   |   |
|  | ECEIVED                                     |
|  | AUG 2 8 1992                                |
| REC  | MISSOURTAINED<br>LAMATION COMMISSION        |
|  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION                               |   |
| Not applicable.  |   |
|  |   |
|  |   |
|  |   |

| D 055       |          |   |
|-------------|----------|---|
| B. SPOI     |          |   |
| DESCRIBE    | E METHOD | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| N- A        | 14       |   |
| Not         | appli    | cable in reclamation.   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
| 1           |          |   |
|             |          |   |
|             |          |   |
| C. ACID     |          |   |
| DESCRIBE    | METHOD   | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)                 |
| N           | _        |   |
| None        | е        |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
| D. PIT II   | NFORM    | ATION (GIVE ALL DIMENSIONS IN FEET)   |
|             |          | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
|             |          |   |
| Not         | appli    | cable - in reclamation.   |
|             |          |   |
| 1           |          |   |
|             |          |   |
|             |          |   |
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|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
|             |          |   |
| YES         | NO       |   |
|             | _        |   |
|             | X        | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?                  |
|             |          |   |
|             | X        | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any |
|             | -        | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may     |
|             |          | start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet  |
|             |          | or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is    |
|             |          | greater, unless a variance is granted by the Commission.)   |
|             |          | greater, unless a variance is granted by the Commission.)   |
|             | X        | Will any execution start at an within fifty fact (EO') of any property line?                                  |
|             | س        | Will any excavation start at or within fifty feet (50') of any property line?                                 |
|             |          | (NOTE: If the answer is "yes", a safety barrier may be needed.)   |
| MO 780-1327 |          | PAGE 2 OF 5   |

| RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. |                     |                             |
|---|---------------------|-----------------------------|
| A. REVEGETATION (Attach additional sho      | eets, if needed)    |                             |
|   | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
| Mixture #1                                  | Pasture             | Fall or Spring              |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulci will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 25                  |                       |            |
|                     | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2          | Pasture             | Fall or Sp            | ring       |

## DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                      | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|-------------------------------------|-------------|-----------------------|------------|
| Orchard Grass                       | 10          |                       |            |
| Korean Lespedeza                    | 6           |                       |            |
| Wheat or oats                       | 30          |                       |            |
| Use serecea lespedeza<br>on slopes. | 20          |                       |            |
|                                     |             |                       |            |
|                                     |             |                       |            |

| DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES                        |                  |
|---|------------------|
| All areas above the water level have been graded to traversable slopes          | . A three acre   |
| lake was created by Pit 1 and a two acre lake was created by Pit 2.             |                  |
|   |                  |
|   |                  |
|   |                  |
|   |                  |
| 1   |                  |
|   |                  |
|   |                  |
|   |                  |
|   |                  |
|   |                  |
|   |                  |
|   |                  |
| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES GRADING |                  |
|   |                  |
| Already completed.  |                  |
|   |                  |
|   |                  |
| REPLACEMENT OF TOPSOIL  |                  |
|   |                  |
| Already completed.  |                  |
|   |                  |
|   |                  |
| REVEGETATION  |                  |
| We will continue to reseed this site each year until it is released.            |                  |
|   |                  |
|   |                  |
|   |                  |
| AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)                                      |                  |
|   |                  |
| D. USE OF LAND WHEN RECLAIMED   | ESTIMATED ACRES: |
| Estimate acreage of each land use below, after reclamation                      |                  |
| Wildlife (forest or other habitat with livestock excluded)                      |                  |
|   |                  |
| Agricultural (pasture, cropland, and horticultural)                             | 6                |
|   |                  |
| Development (residential, industrial, and recreational)                         |                  |
|   |                  |
| Water impoundments (for wildlife, agricultural, or development)                 | 5                |
| MO 780-1327 (12-91)   | PAGE 4 OF        |

PAGE 4 OF 5

- B. GRADING

## By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                                     | TITLE                       | DATE                                     |
|--|-----------------------------|--|
| Jeffrey P. Jahn  | Manager-<br>Mining & Explor | ration 8/17/62                           |
| NOTARY PUBLIC EMBOSSER SEAL C STATE                        |                             | COUNTY (OR CITY OF ST. LOUIS)            |
| SUBSCRIBED AND SWORN BEFORE ME. TH                         | iie                         | Allegheny                                |
| 17 th DAY OF Que   | / 00                        | USE RUBBER STAMP IN CLEAR AREA BELOW     |
| NOTARY PUBLIC SIGNATURE                                    | MY COMMISSION<br>EXPIRES    | lors                                     |
| Toretta M. Dottschlin                                      | 9 3-20-95                   | Loretani Grani<br>Securio<br>Micorrisono |
| NOTARY PUBLIC NAME (TYPED OR PRINTED) / Lovetta M. Gottsc. | 1                           | COMPANY HAR                              |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE)                    | DATE MPROVED                | PERMIT NUMBER                            |

Callaurary

ECEIVE

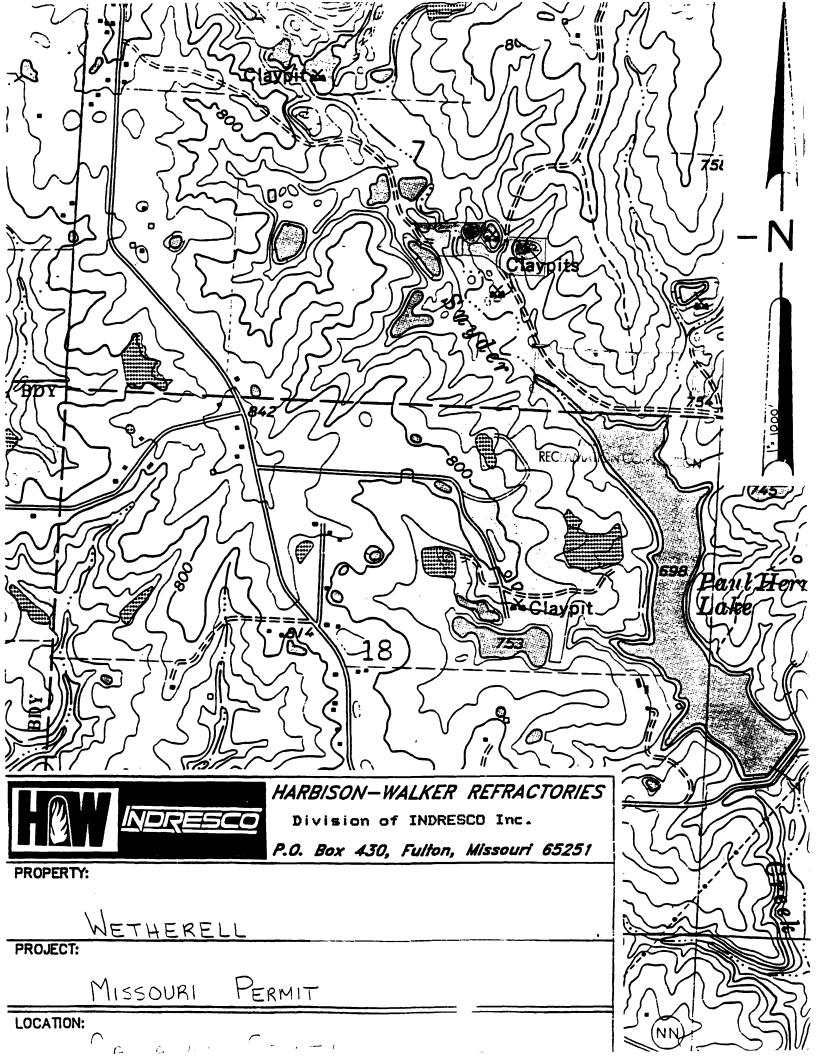
WETHERELL

AUG 2 8 1992

MISSOURI CAND RECLAMATION COMMISSION

T. 46 N. – R. 9 W. Eugene P. Backer 7 Louise Williams c. William L. Williams seorge E. Peniston 221.4 1**58**.75 HALLS Keeting Elley George E. Peniston Mae 8. Masek, Trus R. Ray Tayler, Hal 159 George Peniston John D. Wilkins 3/6 George Lawrence A Peniston Bartley 159 198 E.C. Tennyson etal George E. Peniston 135 120 160 PP 1990 Rockford Map Publs. Inc SEE PAGE 33

W





MO 780-1036 (17-01)

| CHECKING OF MUNICED  | e area of disturbance assoc | ciated with mining operation       |   |
|--|-----------------------------|------------------------------------|---|
| SITE NAME OR NUMBER  |                             | PERMIT NUMBER                      |   |
| M. White   |                             | 146                                |   |
| COMPANY NAME   |                             |                                    |   |
| Harbison-Walker Refract  | ories, Division of I        | NDRESCO Inc.                       |   |
| COUNTY   | 1/4 SECTION                 |                                    | SECTION   |
| Lincoln  | Lot Q-2                     |                                    |   |
| TOWNSHIP   | RANGE                       |                                    | ACRES   |
| U.S.Survey 1710  |                             |                                    | 10  |
| RIVER OR STREAM NAME (FOR IN-STREAM  | AM ACRES)                   |                                    |   |
|  | ·                           |                                    |   |
| MINERAL COMMODITY  |                             | ESTIMATED TONS/YEAR                | FOR GRAVEL SITES)   |
|  |                             | LOTIMITED TOTOL PART               |   |
| Clay   |                             |                                    |   |
|  |                             |                                    |   |
| NAME OF LANDOWNER (ATTACH LIST IF  | MORE THAN ONE)              |                                    |   |
| Mr. & Mrs. John McCue  |                             |                                    |   |
| ADDRESS  |                             |                                    |   |
| Box 68   |                             |                                    |   |
| CITY   |                             | STATE                              | ZIP CODE  |
| Whiteside  |                             | Missouri                           | 63387   |
| SOURCE OF RIGHT TO MINE (CHECK ON  | IE):                        |                                    | DATE OF AGREEMENT   |
| MINERAL DEED   | •                           | LEASE                              |   |
| WARRANTY DEED  |                             | VERBAL AGREEMENT                   |   |
| OTHER (DESCRIBE):  |                             |                                    |   |
|  |                             |                                    |   |
|  |                             |                                    |   |
|  |                             | 7-4                                | BARTEN TON FOR  |
|  |                             |                                    | ECLIVED   |
|  |                             |                                    | )   |
| MINERAL RIGHTS OWNER (ATTACH LIST<br>Harbison-Walker Refract   |                             |                                    |   |
| Harbison-Walker Refract  | cories, Division of         | INDRESCO Inc.                      | JUN 2 5 1993<br>MISSOURI LAND   |
| Harbison-Walker Refract  | cories, Division of         | INDRESCO Inc.                      | JUN 2 5 1993  |
| Harbison-Walker Refract  | cories, Division of         | INDRESCO Inc.                      | JUN 2 5 1993  MISSOURI LAND  CLAMATION COMMISSION  ZIP CODE   |
| Harbison-Walker Refract ADDRESS P. O. Box 430, 1301 Wes  | cories, Division of         | INDRESCO Inc.                      | JUN 25 1993  MISSOURI LAND  CLAMATION COMMISSION  |
| Harbison-Walker Refract ADDRESS P. O. Box 430, 1301 Wes CITY Fulton                                      | stminster Avenue            | INDRESCO Inc.                      | JUN 2 5 1993  MISSOURI LAND  CLAMATION COMMISSION  ZIP CODE   |
| Harbison-Walker Refract ADDRESS P. O. Box 430, 1301 Wes CITY Fulton                                      | stminster Avenue            | INDRESCO Inc.                      | JUN 2 5 1993  MISSOURI LAND ECLAMATION COMMISSION  ZIP CODE 65251  DATE OF AGREEMENT                |
| Harbison-Walker Refract  ADDRESS P. O. Box 430, 1301 Wes  CITY Fulton  SOURCE OF RIGHT TO MINE (CHECK ON | stminster Avenue            | INDRESCO Inc.  RI  STATE  Missouri | JUN 2 5 1993  MISSOURI LAND ECLAMATION COMMISSION  ZIP CODE 65251  DATE OF AGREEMENT  June 30, 1939 |

P.O. BOX 176 JEFFERSON CITY, MO 65102

|   | WALL .   |
|---|--|
| ſ | TYPE OF PLAN (CHECK ONE):  |
| l | SHORT TERM, FOR ONE PERMIT YEAR  |
|   | LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2003   |
|   | DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.   |
|   | WHITE  |
|   | There are three tracts encompassing ten acres covered by this plan. The five acre tract in the Northeast corner is currently planted in row crops and has slopes of less than 3 percent. An old pre-1972 law clay pit exists in the southwest corner of the 5 acres. A triangular shaped 3 acre tract in the south central portion of the property is also planted in row crops and has gentle slopes. Three very small pits will be mined on this area. The third tract is in the lower southeast corner of the property. It is mostly wooded and has gentle slopes. A pre-1972 law clay pit also exists in the southeast corner of this tract. Topsoil on all areas is thick and adequate. |
|   |  |
| ŀ | OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |
|   | A. TOPSOIL   |
| ŀ | AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?  |
| ١ | 1  |
|   | $12$ INCHES $\square$ YES OR $\boxtimes$ NO  |
| Ì | DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |
|   | Topsoil will be removed by dozers and rubber-tired scrapers and stored nearby. We will remove at least 12 inches before mining begins.   |
|   |  |
| 1 | DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |
|   | Topsoil will be stored in gently sloping piles. Topsoil storage piles will be seeded with annual grasses, if necessary, to control erosion.  |
|   |  |
| 1 |  |

JUN 25 1993 MISSOURITAND

| - 000I                  |                           |   |
|-------------------------|---------------------------|---|
| B. SPOI                 |                           | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| mined<br>be mo<br>the s | porti<br>ved us<br>poil w | rom the excavation will be placed in the pre-1972 law pits or the previously ons of the area being permitted and graded to gentle slopes. The spoil will ing dozers and rubber-tired scrapers. If the old pits become full or unavailable, ill be placed on the lower end of the pit to form a small dam. All spoil areas all graded to traversable slopes.   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
| C. ACIE                 | MATER                     | RIALS   |
|                         |                           | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
| None.                   |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
|                         |                           |   |
| D DIT                   | NEODM                     | ATION (GIVE ALL DIMENSIONS IN FEET)   |
|                         |                           | ON AND ORIENTATION OF PIT. IF NOT CLEAR ON SITE MAPS  |
| smal1                   | pits                      | oit approximately 400 feet long by 200 feet wide is on the 5 acre tract. Three approximately 100 feet in diameter are on the triangular tract. One pit approxifeet in diameter is on the 2 acre tract in the lower southeast corner.  |
| •                       |                           | JUN 2 5 1993  MISSOURI LAND  PRO AMATION COMMISSION   |
| YES                     | NO                        | RECEDIANCE  |
|                         |                           |   |
|                         | X                         | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|                         | X                         | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|                         | X                         | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

PAGE 2 OF 5

MO 780-1327 (12-91)

| RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. |                     |                             |  |  |  |
|---|---------------------|-----------------------------|--|--|--|
| A. REVEGETATION (Attach additional she      | ets, if needed)     |                             |  |  |  |
| REVEGETATION MIX #1                         | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |  |  |  |
| Mixture #1                                  | Pasture             | Fall or Spring              |  |  |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES     | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--------------------|---------------------|-----------------------|------------|
| Tall Fescue        | 25                  |                       |            |
| Red Clover         | 5                   |                       |            |
| Wheat or oats      | 30                  |                       |            |
|                    |                     |                       |            |
|                    |                     |                       | 1          |
|                    |                     |                       | 1          |
| EVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2         | Pasture             | Fall or Sp            | ring       |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIES                             | STEMS/ACRE |
|---|---------------------|---|------------|
| Orchard Grass Korean Lespedeza Wheat or oats Use serecea lespedeza on slopes. | 10<br>6<br>30<br>20 | JUN 25 1993  MISSOURI LAND RECLAMATION COMMISSION |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

#### B. GRADING

#### DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left in each of the three areas by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using dozers. Terraces and diversion ditches will be constructed as necessary to control runoff and erosion. Fescue hay bales will be used to control rillings and gullies.

#### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### GRADING

Grading will be done as the pit advances and as spoil is placed in the mined out areas. Final grading will be completed within one year after mined out portions are backfilled.

#### REPLACEMENT OF TOPSOIL

Topsoil will be laid down within one year after each area is final graded. Topsoil will be replaced to a depth of 12 inches. Topsoil will be replaced within one year of final grading.

#### REVEGETATION

All topsoiled areas will be seeded during the first Spring or Fall following topsoil replacement.

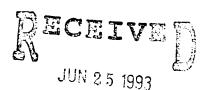
#### AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

12 inches

| D. USE OF LAND WHEN RECLAIMED                                   |                        |                  |
|---|------------------------|------------------|
| Estimate acreage of each land use below, after reclamation      |                        | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)      |                        |                  |
| Agricultural (pasture, cropland, and horticultural)             | JUN 2 5 1993           | 4                |
| Development (residential, industrial, and recreational)         | RECLAMATION COMMISSION | ,                |
| Water impoundments (for wildlife, agricultural, or development) |                        | 6                |

By my signature, I attest to the following:

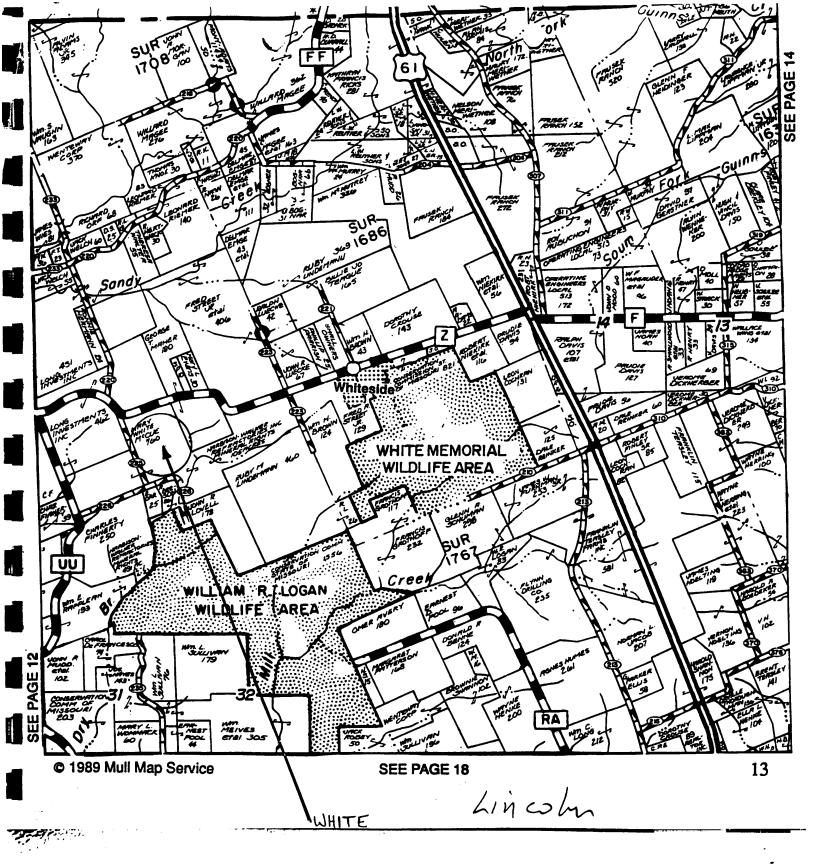
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.



MISSOURI LAND RECLAMATION COMMISSION

|                              | -5/0/4                                |                          |  |
|------------------------------|---------------------------------------|--------------------------|--|
| SIGNATURE OF APPLICANT       | . 00                                  | TITLE                    | DATE   |
| John                         | Muther                                | Vice-President-          | June 15, 1993<br>Manufacturing                       |
| NOTARY PUBLIC EMBOSSER SEAL  | ŠTATE                                 |                          | COUNTY (OR CITY OF ST. LOUIS)                        |
|                              | Missouri                              |                          |  |
| \ /                          | SUBSCRIBED AND SWORN BEFORE ME, TH    | IIS                      | Callaway   |
|                              | 15th DAY OF June                      | 19 9 3                   | USE RUBBER STAMP IN CLEAR AREA BELOW                 |
|                              | NOTARY PUBLIC SIGNATURE               | MY COMMISSION<br>EXPIRES | MARY SUE FLETCHER<br>NOTARY PUBLIC STATE OF MISSOURI |
| 2                            | Drawn Suc. Fletcher                   | 04/11/1996               | CALLAWAY COUNTY                                      |
| ·                            | NOTARY PUBLIC NAME (TYPED OR PRINTED) |                          | MY COMMISSION EXP. APR. 11,1996                      |
| <u> </u>                     | Mary Sue Fletcher                     |                          |  |
|                              |                                       |                          |  |
| APPROVED BY (DIRECTOR'S REPR | ESENTATIVE)                           | DATE APPROVED            | PERMIT NUMBER  |

MO 780-1327 (12-91)

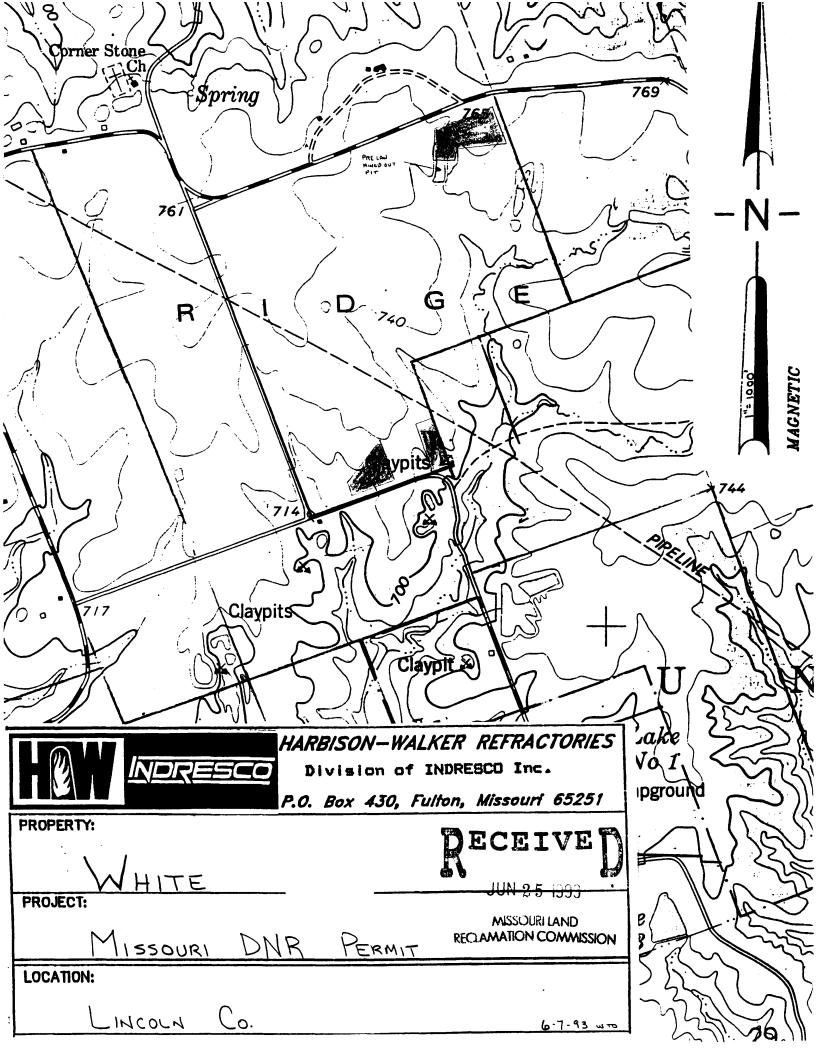


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JUN 25 1993

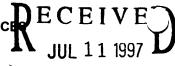
MISSOURITAND
RECLAMATION COMMISSION



## MISSOURI DEPARTMENT OF N. JRAL RESOURCE

LAND RECLAMATION COMMISSION

#### SITE INFORMATION FORM



P.O. BOX 176 **JEFFERSON CITY, MO 65102** 

MISSOURI LAND RECLAMATION COMMISSION NUMBER SITE NAME OR NUMBER Wildore Realty Pit 3&4 COMPANY NAME Harbison-Walker Refractories Company COUNTY 1/4 SECTION SECTION SE Warren 33 TOWNSHIP RANGE **ACRES** 47 North 3 West 14 RIVER OR STREAM NAME (FOR IN-STREAM ACRES) MINERAL COMMODITY ESTIMATED TONS/YEAR (FOR GRAVEL SITES) Fire Clay NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE) John and Helena Zadarnowski **ADDRESS** 1006 Mackinac Rd. STATE CITY ZIP CODE Creve Coeur Missouri 63146 SOURCE OF RIGHT TO MINE (CHECK ONE): DATE OF AGREEMENT MINERAL DEED **LEASE WARRANTY DEED VERBAL AGREEMENT** OTHER (DESCRIBE): As per David Hill 7-29-97 MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) Same a abre Harbison-Walker Refractories Company MB **ADDRESS** PQ Box 430 CITY STATE ZIP CODE **Fulton** Missouri 65251 ---SOURCE OF RIGHT TO MINE (CHECK ONE): DATE OF AGREEMENT MINERAL DEED X LEASE November 12, 1937 **WARRANTY DEED** VERBAL AGREEMENT OTHER (DESCRIBE):

NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan.

MO 780-1036 (12-91)

## MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND RECLAMATION COMMISSION





| TYPE OF PLAN (CHECK ONE):   |   | KECLAVVAIION COMMISSION                              | ٧  |
|---|---|--|----|
| SHORT TERM, FOR ONE PERMIT YEAR   |   |  |    |
|   |   |  |    |
| LONG TERM, FOR PERIOD THROUGH DATE:   | 03/01/2007  |  |    |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMI  | TTING (BY APPLICANT OR PRIOR OPERA                              | TOR), INCLUDING SOIL, VEGETATION, AND TOPOGRAPHY     | 1. |
| The site is moderately sloping with a deep draw The soil is typical for the area with soil thinning v   |   | All of the site is in open timber.                   |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.   |   |  |    |
|   |   |  |    |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSIO   | N PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?          |    |
| 12  | _ INCHES  | YES X NO   |    |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL   |   |  |    |
|   |   |  |    |
| Topsoil will be removed using rubber-tired scrap near the pit within the permit area. We will remove disturbed before mining or stripping begins. | pers and bulldozers. The tops<br>ove the 12 inches of surficial | soil will be stored<br>material from all areas to be |    |
|   |   |  |    |
|   |   |  |    |
|   | •   |  |    |
|   |   |  |    |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND   | PROTECTION  |  |    |
| Surficial material will be stored in gently sloping to control erosion.   | piles and will be seeded with                                   | n annual grasses, if necessary,                      |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |
|   |   |  |    |

|                            |              |  | ^   | DECEIVE   |
|----------------------------|--------------|--|---|---|
| SPOIL                      |              | $\mathbf{O}$   |   | JUL 1 1 1997  |
| Spoil will                 | be moved     | on of SPOIL PLACEMENT AND DISPOSAL  d using rubber-tired scrapers and bull dozers will be used to make a dam to the west of pit  | to form a backfill are<br>3 the remainder of th                                     | MISSOURI LAND<br>ea t <b>attobywaationpit ommissi</b><br>he spoil will be used to |
| ACID MATE                  | RIALS        |  |   |   |
| RIBE METHODS               | AND EQUIPM   | ENT USED FOR HANDLING ACID MATERIALS (IF NONE IS AN  | TICIPATED, WRITE "NONE" BE  | FLOW)   |
| None                       |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
| NEODMAT                    |              | - ALL DIMENSIONS IN SECT   |   |   |
|                            |              | E ALL DIMENSIONS IN FEET)  ATION OF PIT, IF NOT CLEAR ON SITE MAPS   |   |   |
|                            |              |  |   |   |
| Pit#3 is                   | located in   | the eastern part of the reservation while pit 4  | is located on the sou   | uth of the reservation.   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
|                            |              |  |   |   |
| YES                        | NO           |  |   |   |
|                            | X            | Will any excavation be at or within fifty feet (50') of  | the right-of-way of any pub   | olic road?  |
|                            | e            |  |   |   |
|                            | [ <b>X</b> ] | Will any highwall consisting of unconsolidated materials public road? (NOTE: For unconsolidated materials start near the right of way, and in no case may the or twenty-five feet plus on an one-half (1-1/2) times greater, unless a variance is granted by the Committee of the comm | left in place, a slope of no excavation be closer to the the depth of unconsolidate | more than forty degrees may<br>right of way than fifty feet                       |
|                            | X            | Will any excavation start at or within fifty feet (50') of (NOTE: If the answer is "yes", a safety barrier ma  |   |   |
| -1327 (12- <del>81</del> ) |              |  |   | Page 2  |

#### RECLAMATION PLAN - 10 CSR 40-10.020(2) -2.

| A. REVEGETATION (Attach additional sheets, if | needed)             | MISSOURI LAND         | <del>.</del> .           |
|---|---------------------|-----------------------|--------------------------|
| REVEGETATION MIX #1                           | PURPOSE OR LAND USE | RECLAMATION COMMISSIO | B. SEEDING OR PLANT TIME |
| Mixture #1                                    | Develop             | oment                 | Fall or Spring           |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------|-----------------------|------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |            |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Development         | Fall or Spring              |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES                  | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------------------------|-------------|-----------------------|------------|
|                                  |             |                       |            |
| Orchard Grass                    | 10          |                       |            |
| Korean Lespedeza                 | 6           | ;<br>                 |            |
| Wheat or Oats                    | 30          |                       |            |
| Serecea Lespedeza<br>(On Slopes) | 20          |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

#### B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

RECEIVED

JUL 11 1997

MISSOURI LAND

RECLAMATION COMMISSION

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. A small impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF | THE FOLLOWING ACTIVITIES |
|--|--------------------------|
|--|--------------------------|

#### GRADING

Grading will be done as mining advances and spoil is either backfilled or put into a dam. Final grading of all disturbed areas will be completed within one year after mining.

#### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

#### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12   |                  |
|--|------------------|
| D. USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                 | 0                |
| Agricultural (pasture, cropland, and horticultural)  | 0                |
| Development (residential, industrial, and recreational)                                    | 10               |
| Water impoundments (for wildlife, agricultural, or development)                            | 4                |





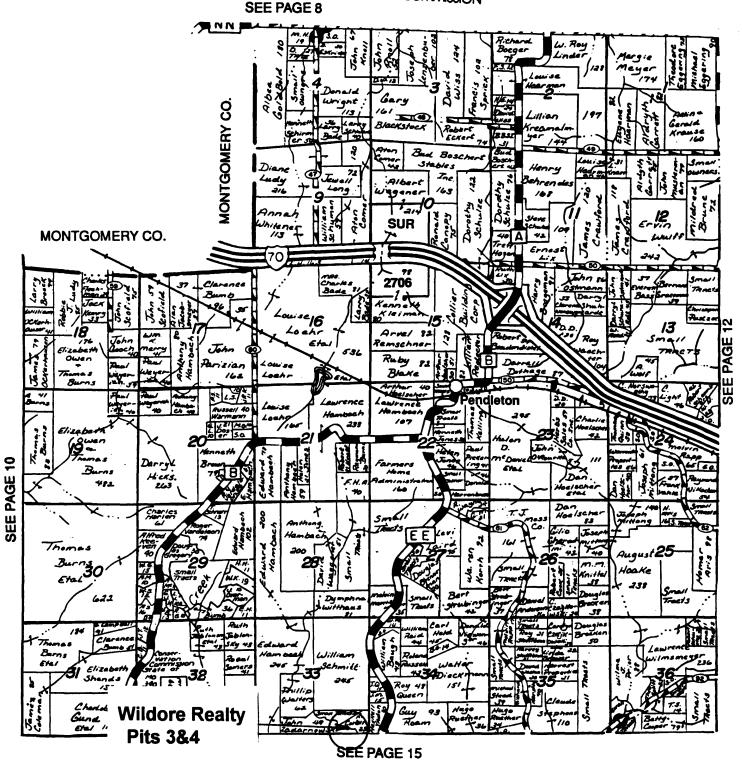
MISSOURI LAND RECLAMATION COMMISSION

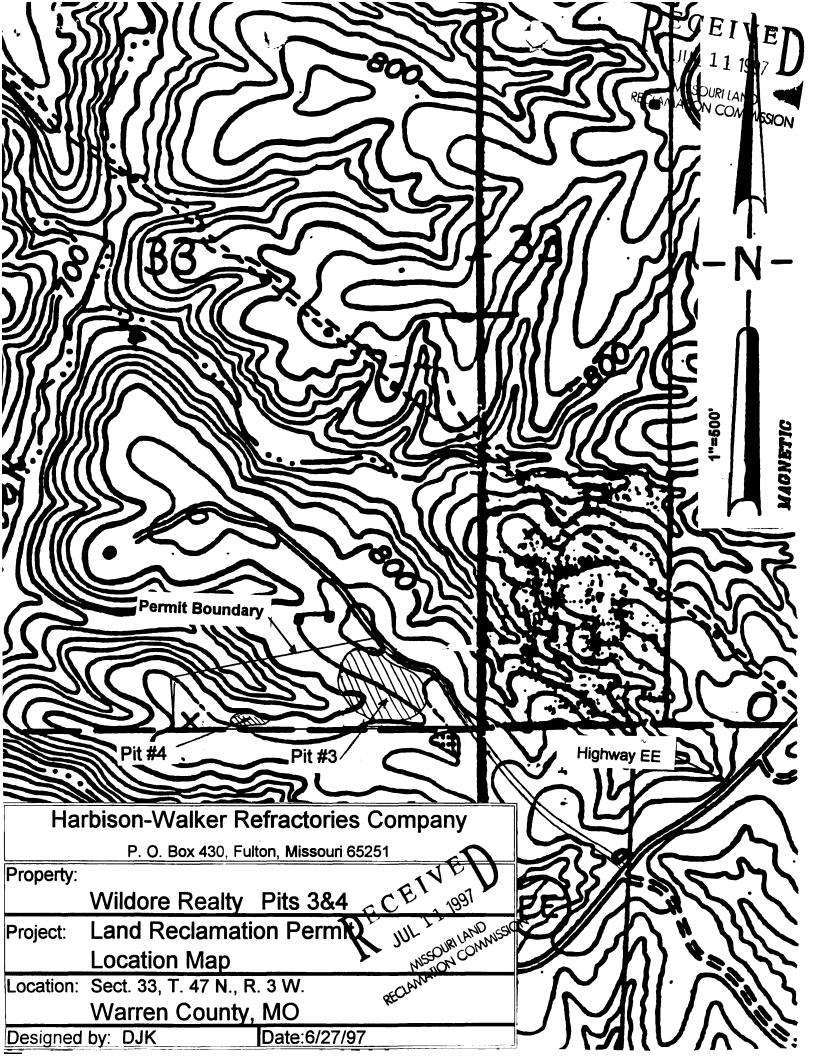
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

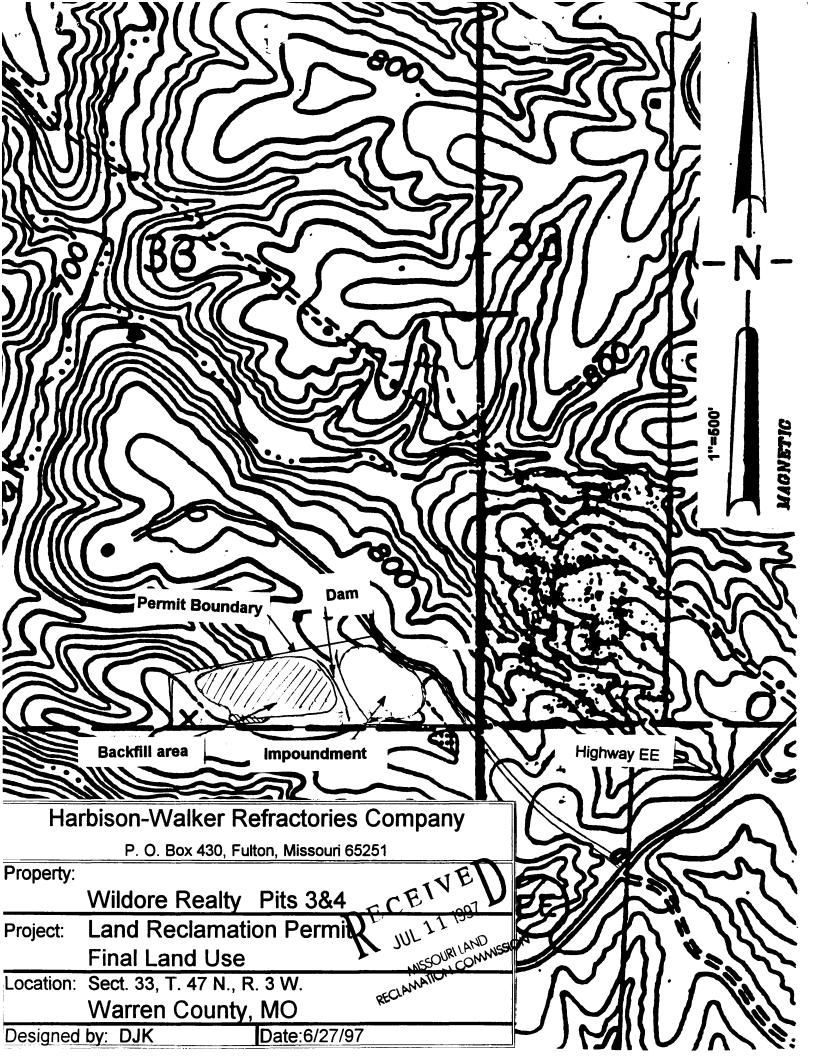
| SIGNATURE OF APPLICANT                  | TITLE   |                            | DATE   |
|---|---|----------------------------|--|
| x William K. B                          | Hour Me   | treside                    | nt 13/97   |
| NOTARY PUBLIC EMBOSSER SEAL             | STATE POINT OF THE SUBSCRIBED AND SWORN BEFORE ME, THIS |                            | COUNTY (OR CITY OF ST. LOUIS)  Allegheny   |
|   | 3 PD DAY OF JULY  | 19 97                      | USE RUBBER STAMP IN CLEAR AREA BELOW   |
|   | MY CO EXPIR   | DIMMISSION / DES (1/29/97) | Notarial Seal<br>Kathleen S. Fuchs, Notary Public<br>Pittsburgh, Allegheny County<br>My Commission Expires Nov. 29, 1997 |
|   | Kathleen J.   | Fuchs                      | Member, Pennsylvania Association of Notaries   |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED   | PERMIT NUMBER              | EXPIRATION DATE  |
| Wolsen Sklirt                           | 7-29-97   | 14.                        | 6 7-31-2007  |
| MO 788-1327 (12-91)                     |   |                            | Page 5   |

# Township 47 RECEIVE D Range 3W

MISSOURI LAND : RECLAMATION COMMISSION







## MISSOURI DEPARTMENT NATURAL RESOURCES LAND RECLAMATION COMMISSION SITE INFORMATION FORM

| MANTEN  |
|---|
| P.O. BOX THAN AND STORY DEPT. SONO CITY, MO 65102 |
| JEFFERSON CITY, MO 65102                          |

| SITE NAME OR NUMBER   |                                   | PERMIT NUMBER                          |
|---|-----------------------------------|--|
| Woodruff #1   |                                   | 146                                    |
| COMPANY NAME  |                                   | -                                      |
| Harbison-Walker Refractories Company                              |                                   |  |
| COUNTY  | 1/4 SECTION                       | SECTION                                |
| Maries  | NE 1/4                            | 32                                     |
| TOWNSHIP  | RANGE                             | ACRES                                  |
| 40 N  | 7 W                               | 4                                      |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)                        |                                   |  |
|   |                                   |  |
| MINERAL COMMODITY   |                                   | ESTIMATED TONS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |                                   |  |
|   |                                   |  |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)                |                                   |  |
| Mr. Jerry Wiles   |                                   |  |
| ADDRESS   |                                   |  |
| Route 2, Box 21   |                                   |  |
| CITY  | STATE                             | ZIP CODE                               |
| Vichy   | МО                                | 65580                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):                              |                                   | DATE OF AGREEMENT                      |
| MINERAL DEED  | LEASE                             |  |
| WARRANTY DEED   | VERBAL AGREEME                    | ENT                                    |
|   | VERBAL AGREEME                    | -111                                   |
| OTHER (DESCRIBE):   |                                   |  |
|   |                                   |  |
|   | <u></u>                           |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)               |                                   | ı                                      |
| Harbison-Walker Refractories Company                              |                                   |  |
| ADDRESS   |                                   |  |
| P.O. Box 430  | r                                 |  |
| CITY  | STATE                             | ZIP CODE                               |
| Fulton  | Missouri                          | 65251                                  |
| SOURCE OF RIGHT TO MINE (CHECK ONL):                              |                                   | DATE OF AGREEMENT                      |
| X MINERAL DEED  | LEASE                             | 05/30/73                               |
| WARRANTY DEED   | VERBAL AGREEME                    | ENT                                    |
| OTHER (DESCRIBE):   |                                   |  |
| NOTE: Each site must be sown on a map and be included in a public | notice and an approved mine plan. |  |

#### MISSOURI DEPARTMENT OF NATO L RESOURCES LAND REC

#### PERMIT A

| LAND RECLAMATION COMMISSION  | OUNCES (  | $\mathcal{L}_{EC_{EIV}}$  |
|--|---|---|
| PERMIT APPLICATION FOR INDUSTRI  | IAL MINERAL MINES   | JAN 1 2000  |
| TYPE OF PLAN (CHECK ONE)   |   | Pso Misso 2000  |
| SHORT TERM, FOR ONE PERMIT YEAR  |   | RECLAMATION COM   |
| X LONG TERM, FOR PERIOD THROUGH DATE:  | 12/31/2050  | RECLAMATION COMMISSION  |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | G (BY APPLICANT OR PRIOR OPERATOR), INCLUDING   | SOIL, VEGETATION, AND TOPOGRAPHY  |
| The soil is rocky loam, vegetation consists of and slope toward the north.   | of small timber with typical underb   | rush. Slopes are moderate   |
|  |   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |   |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COM  | MISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?   |
|  | ! INCHES  | YES X NO  |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVA   | AL.   |   |
| Prior to topsoil removal and immediately for<br>control measures will be installed including<br>basins in any combination depending on site<br>scrapers and/or bulldozers. The topsoil will<br>surficial material from all areas to be disturb | straw bale dikes, silt fences, rock<br>e specific conditions. Topsoil will<br>be stored near the pit within the p | check dams or sediment be removed using rubber-tired permitted pit area. We will remove the |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAG   | GE AND PROTECTION   |   |
| Surficial material will be stored in gently slo<br>to control any erosion .  | ping piles and will be seeded if ne   | ecessary with a cover crop  |

| B. SPOIL                   |   |  |
|----------------------------|---|--|
| DESCRIBE METHODS AND LOCA  | TION OF SPOIL PLACEMENT AND DISPOSAL  |  |
| to the north of the        | Spoil will be stockpiled adjacent to the excavation and within the permit boundary to form a dam to the north of the pit. After mining is completed the spoil will be graded into a dam or backfilled in the pit as is warrented. $ \begin{array}{c} ECEIV \\ AN1 & 200 \end{array} $   |  |
|                            | MISSOURI LAND RECLAMATION COMMISSION  |  |
| C. ACID MATERIALS          |   |  |
| DESCRIBE METHODS AND EQUI  | PMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |  |
| None                       |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
| PIT INFORMATION (G         | IVE ALL DIMENSIONS IN FEET)   |  |
| DESCRIBE LOCATION AND ORIE | NTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |  |
|                            |   |  |
| (See site maps)            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
|                            |   |  |
| YES NO                     |   |  |
| x                          | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |  |
| X                          | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of way of and public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus on an one-half (1-1/2) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |  |
| X                          | Will any excavation start at or within fifty feet (50') of any property line?   |  |
|                            | (NOTE: If the answer is "yes", a safety harrier may be needed.)   |  |

#### RECLAMATION PLAN - 10 CSR 40-10 (2)(D)2.

A. REVEGETATION (Attach additional sheets, if needed)

REVEGETATION MIX #1 Mixture #1 PURPOSE OR LAND USE

Wildlife

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1.

| SEEDING SPECIES  | POUNDS/ACRE                    | TREE OR SHRUB SPI | ECIE STEMS/ACRE             |
|--|--------------------------------|-------------------|-----------------------------|
| Orchardgrass Timothy Red Clover Korean Lespediza Wheat or Oats Serecea Lespedeza (on slopes) | 10<br>10<br>5<br>5<br>30<br>10 |                   |                             |
| VEGETATION MIX #2  | PURPOSE                        | OR LAND USE       | B. SEEDING OR PLANTING TIME |

| VEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLANTING TIME |
|-------------------|---------------------|-----------------------------|
| Mixture #2        | Wildlife            | Spring or Fall              |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

will be applied to all slopes exceeding 5:1

| SEEDING SPECIES  | POUNDS/ACRE         | TREE OR SHRUB SPECIE | STEMS/ACRE |
|--|---------------------|----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats Serecea Lespedeza (On Slopes) (On Slopes) | 10<br>6<br>30<br>20 |                      |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. An impoundment will be left by the final phase of mining. The impoundment will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion. In no case will the reclaimed topography exceed a 3:1 slope.

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#### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas or put into a dam to create an impoundment. Final grading of all disturbed areas will be completed within one year after mining. Areas affected, and no longer needed as part of the active operation will graded within one year of the expiration of the permit during which the disturbance occurred.

REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and/or bulldozers after mining is completed as described in accordance whith MO 10CSR-40.10.050 (A)(10)(A).

REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) -12"  |                  |
|---|------------------|
| D USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                | 3                |
| Agricultural (pasture, cropland, and horticultural)                                       | 0                |
| Development (residential, industrial, and recreational)                                   | 0                |
| Water impoundments (for wildlife, agricultural, or development)                           | 1                |

MO 780-1327 (12-91)

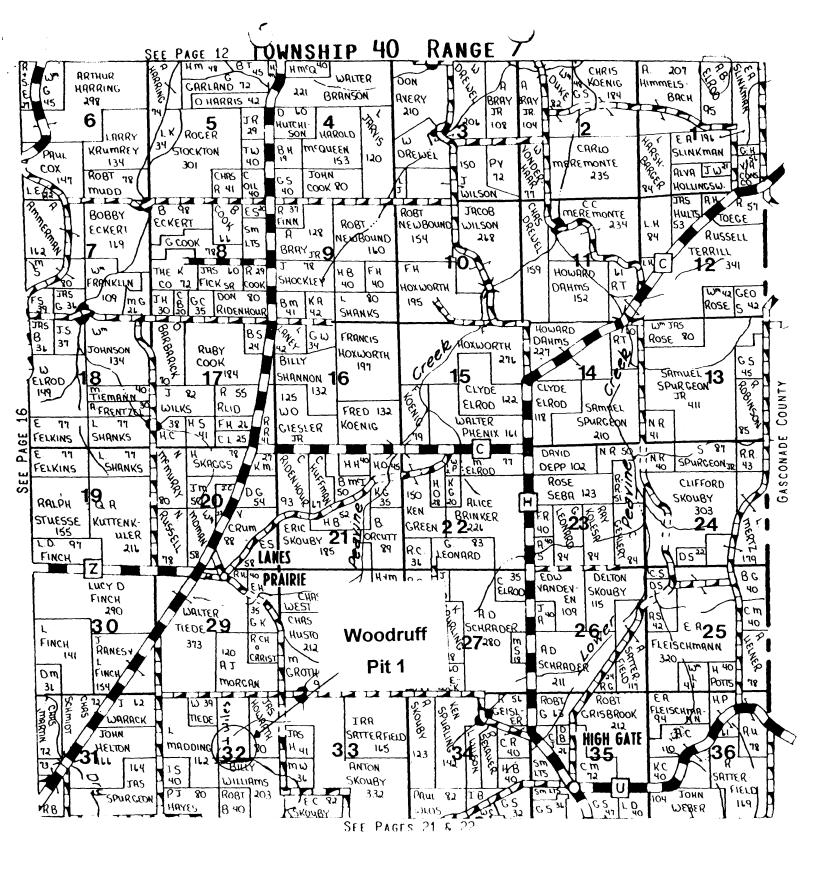


By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

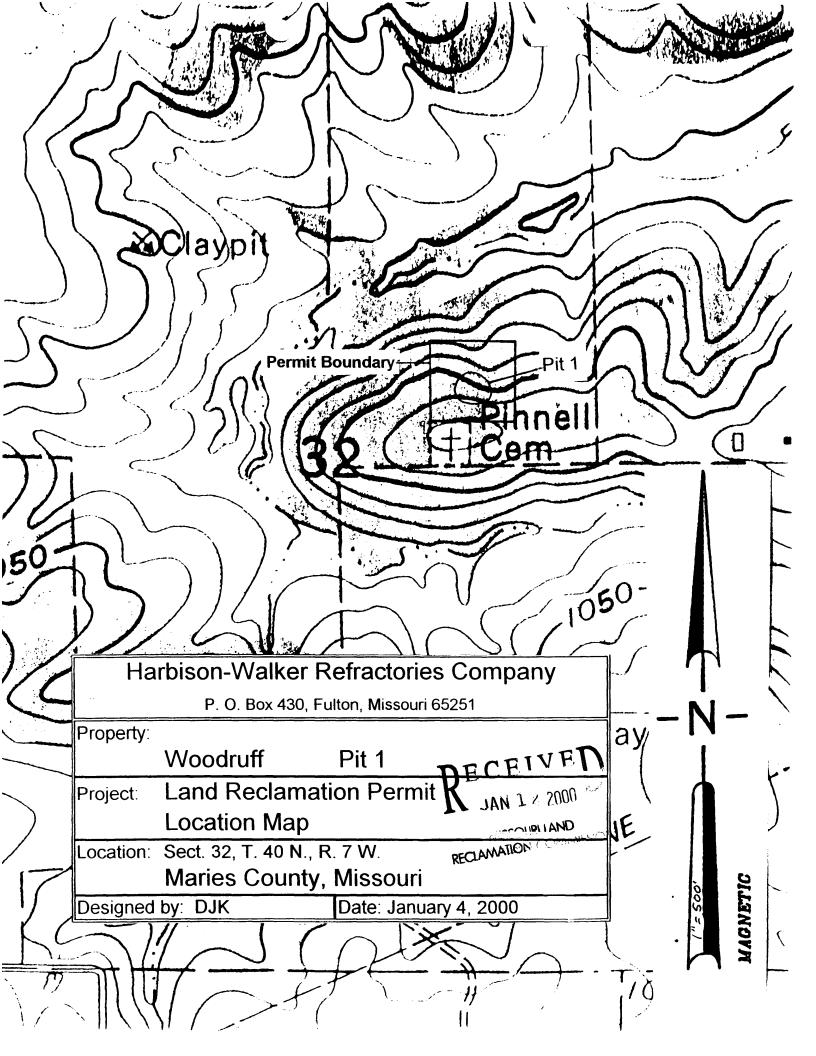
- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

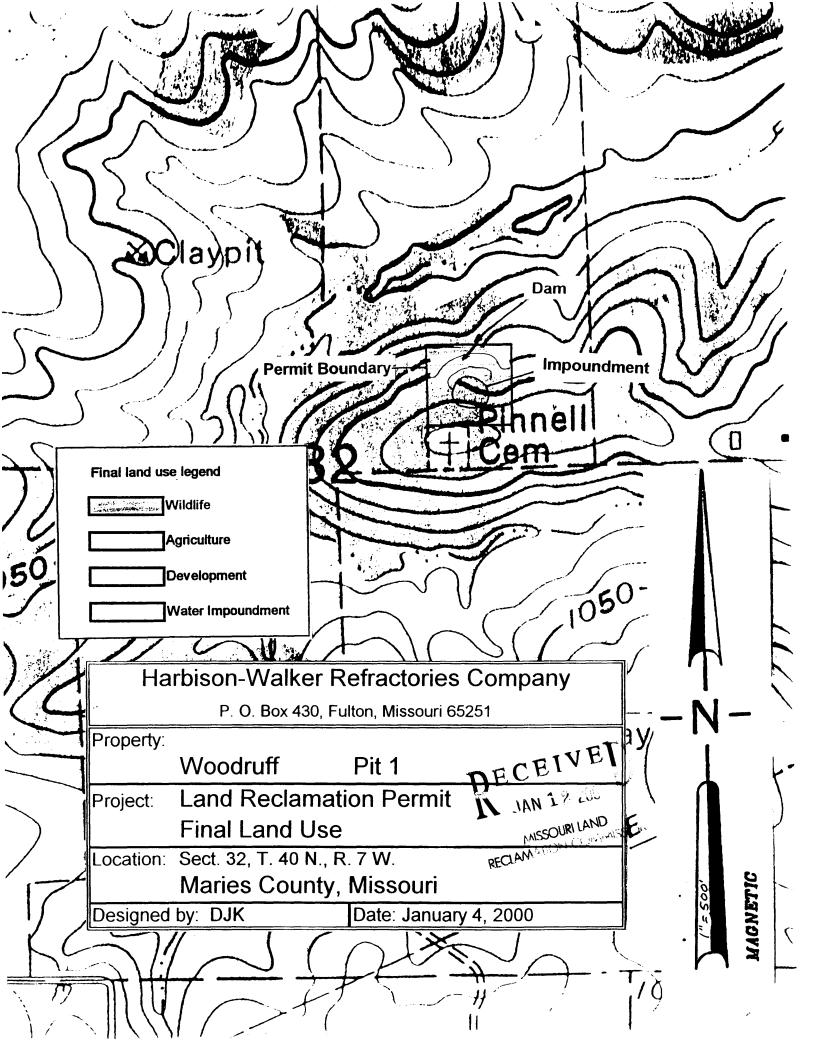
| NOTARY PUBLIC EMBOSSER SEAL             | STATE                                 | COUNTY (OR CITY OF ST. LOUIS) |
|---|---------------------------------------|-------------------------------|
|   | Messoren                              | Carlaway                      |
|   | SUBSCRIBED AND SWORN BEFORE ME, THIS  | USE RUBBER STAMP IN           |
|   | 11 DAY OF January 20 00               | CLEAR AREA BELOW              |
|   | NOTARY PUBLIC SIGNATURE MY COMMISSION | OTARY PUBLIC                  |
|   | Laren & Luther 7-18-03 ST             | TE OF MISSOURI                |
|   |                                       | FERMAY COUNTY                 |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROVED PERMIT NUMBER           |                               |



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RECLAMATION GOMMISSION





MO 780-1036 (12-91)

| To be completed for each separate are   | a of disturbance associate | ed with mining operatio | ns.                |  |
|---|----------------------------|-------------------------|--------------------|--|
| SITE NAME OR NUMBER                     |                            | PERMIT NUMBER           |                    | -  |
| Zimmerman #1                            |                            | 75-146, 74,146          | 6-A,               |  |
| COMPANY NAME                            |                            |                         |                    |  |
| Harbison-Walker Refractorie             | s, Division of INDE        | RESCO, Inc.             |                    |  |
| COUNTY                                  | 1/4 SECTION                |                         | SECTION            |  |
| Montgomery                              | Northeast Quar             | cter                    | 3                  |  |
| TOWNSHIP                                | RANGE                      |                         | ACRES              |  |
| 47 North                                | 5 West                     |                         | 10                 |  |
| RIVER OR STREAM NAME (FOR IN-STREAM AC  |                            |                         |                    |  |
|   |                            |                         |                    |  |
| MINERAL COMMODITY                       |                            | ESTIMATED TONS/YEAR (   | FOR GRAVEL SATES)  | 1  |
| Clay                                    |                            |                         | <b>&amp; &amp;</b> |  |
|   |                            |                         | AU                 | <del>6 ≥ 0 132                                  </del> |
| NAME OF LANDOWNER (ATTACH LIST IF MORE  | THAN ONE)                  |                         | 1Vin               | SOURTHNU   |
| S. S. S. S. S. S. S. S. S. S. S.        | . MAR ORE                  |                         | RECLAMA            | TION COMMISSION  |
| Clark Johnson                           |                            |                         |                    |  |
| ADDRESS                                 |                            |                         |                    |  |
| P. O. Box 45                            |                            | T                       |                    |  |
| CITY                                    |                            | STATE                   | ZIP CO             | DDE  |
| New Florence                            |                            | Missouri                | 633                |  |
| SOURCE OF RIGHT TO MINE (CHECK ONE):    |                            |                         | DATE               | OF AGREEMENT   |
| MINERAL DEED                            |                            | LEASE                   | 5-                 | 13-74  |
| WARRANTY DEED                           |                            | ☐ VERBAL AGREEMENT      |                    |  |
| L OTHER (DESCRIBE):                     |                            |                         |                    |  |
|   |                            |                         |                    |  |
|   |                            |                         |                    |  |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MO | RE THAN ONE)               | _                       |                    |  |
| Same as above.                          |                            |                         |                    |  |
| ADDRESS                                 |                            |                         |                    |  |
|   |                            |                         |                    |  |
| DITY                                    |                            | SIAIE                   | ZIP CC             | DDE  |
|   |                            |                         |                    |  |
| OURCE OF RIGHT TO MINE (CHECK ONE):     |                            |                         | DATE               | OF AGREEMENT   |
| MINERAL DEED                            |                            | LEASE                   |                    |  |
| WARRANTY DEED                           |                            | VERBAL AGREEMENT        |                    |  |
| OTHER (DESCRIBE):                       |                            |                         |                    |  |
|   |                            |                         |                    |  |

P.O. BOX 176

| MINE PLAN  | JEFFERSON CITY, MO 65102                    |
|--|---|
| TYPE OF PLAN (CHECK ONE):  SHORT TERM, FOR ONE PERMIT YEAR  LONG TERM, FOR PERIOD THROUGH DATE: August 1, 2002 |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OF AND TOPOGRAPHY.           | PRIOR OPERATOR), INCLUDING SOIL, VEGETATION |
| ZIMMERMAN #1   |   |
| This plan covers an area of 10 acres total. The site is a  | relatively flat pasture on a                |
| ridge. The southeast portion of the site is a wooded ravin   | •   |
| A gravel county road borders the site on the north side. T   | •   |
| 1990 and has been graded and seeded.   |   |
|  |   |
|  |   |
|  |   |
|  |   |
| ODEDATION DI ANI LO CODI LO LO COCCUENTA   |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  A. TOPSOIL  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING                                      | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 18 INCHES  | YES OR X NO                                 |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |   |
| Already reclaimed - Not applicable.  |   |
|  |   |
|  | DECEIVE                                     |
|  |   |
|  | AUG 2 8 1992                                |
|  | No source )                                 |
|  | RECLAMATION CONVESSION                      |
|  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |   |
| Already reclaimed - Not applicable.  |   |
| · · · · · · · · · · · · · · · · · · ·  |   |
|  |   |

| 1        |             |   |
|----------|-------------|---|
| B. SPO   | IL          |   |
| DESCRIB  | E METHOD    | S AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL  |
| Not      | applio      | cable - in reclamation.   |
|          |             |   |
|          |             |   |
| 1        |             |   |
|          |             |   |
| C ACII   | MATER       | IAI C   |
|          | <del></del> | S AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)   |
|          |             |   |
| NOT      | арріі       | cable - in reclamation.   |
|          |             |   |
| !        |             |   |
|          |             |   |
|          |             |   |
|          |             |   |
| ı        |             |   |
| D. PIT I | NFORMA      | ATION (GIVE ALL DIMENSIONS IN FEET)   |
|          |             | N AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS   |
| No+      | annli       | ashlo - in reglamation  |
| NOL      | арртто      | cable - in reclamation.   |
|          |             |   |
|          |             |   |
|          |             |   |
|          |             |   |
|          |             |   |
| ł        |             |   |
|          |             |   |
| YES      | NO          |   |
|          | x           | Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?  |
|          | x           | Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any   |
|          |             | public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.) |
|          | x           | Will any excavation start at or within fifty feet (50') of any property line? (NOTE: If the answer is "yes", a safety barrier may be needed.)   |

MO 780-1327 (12-91)

PAGE 2 OF 5

| RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2. |                              |                             |  |  |
|---|------------------------------|-----------------------------|--|--|
| A. REVEGETATION (Attach ac                  | Iditional sheets, if needed) |                             |  |  |
| REVEGETATION MIX #1                         | PURPOSE OR LAND USE          | B. SEEDING OR PLANTING TIME |  |  |
| Mixture #1                                  | Pasture                      | Fall or Spring              |  |  |

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-till drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulci-will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES      | POUNDS/ACRE         | TREE OR SHRUB SPECIES | STEMS/ACRE |
|---------------------|---------------------|-----------------------|------------|
| Tall Fescue         | 0.5                 |                       |            |
|                     | 25                  |                       |            |
| Red Clover          | 5                   |                       |            |
| Wheat or oats       | 30                  |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
|                     |                     |                       |            |
| REVEGETATION MIX #2 | PURPOSE OR LAND USE | B. SEEDING OR PLA     | NTING TIME |
| Mixture #2          | Pasture             | Fall or Sp            | ring       |

#### DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be drilled in with a no-til drill. Reseeding will be done as needed to control erosion and achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulci will be applied to all slopes exceeding 5:1.

| SEEDED SPECIES                   | POUNDS/ACRE | TREE OR SHRUB SPECIES | STEMS/ACRE |
|----------------------------------|-------------|-----------------------|------------|
| Orchard Grass                    | 10          |                       |            |
| Korean Lespedeza                 | 6           |                       |            |
| Wheat or oats                    | 30          |                       |            |
| Use serecea lespedeza on slopes. | 20          |                       |            |
|                                  |             |                       |            |
|                                  |             |                       |            |

| B. GRADING  |  |
|---|--|
| DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES                | The second secon |
| All slopes above the anticipated water level have been graded to 3 to   | l or less. A dam   |
| was built on the south end of the pit to increase the size of the imp   | oundment. The  |
| watershed of this pit is small and it will take quite a while for the   | pit to fill up.  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
| C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES |  |
| GRADING   |  |
| Done.   |  |
|   |  |
|   |  |
|   |  |
| REPLACEMENT OF TOPSOIL  |  |
| Done.   |  |
|   |  |
|   |  |
|   |  |
| REVEGETATION  |  |
| We plan to reseed this pit each year until a suitable stand is achieve  | ed.  |
|   |  |
|   |  |
|   |  |
| AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)                              |  |
| 6 τς.<br>D. USE OF LAND WHEN RECLAIMED                                  | I  |
| Estimate acreage of each land use below, after reclamation              | ESTIMATED ACRES:   |
|   |  |
| Wildlife (forest or other habitat with livestock excluded)              |  |
| Agricultural (pasture, cropland, and horticultural)                     | 5  |
| -g  | J  |
| Development (residential, industrial, and recreational)                 |  |
|   |  |
| Nater impoundments (for wildlife, agricultural, or development)         | 5  |

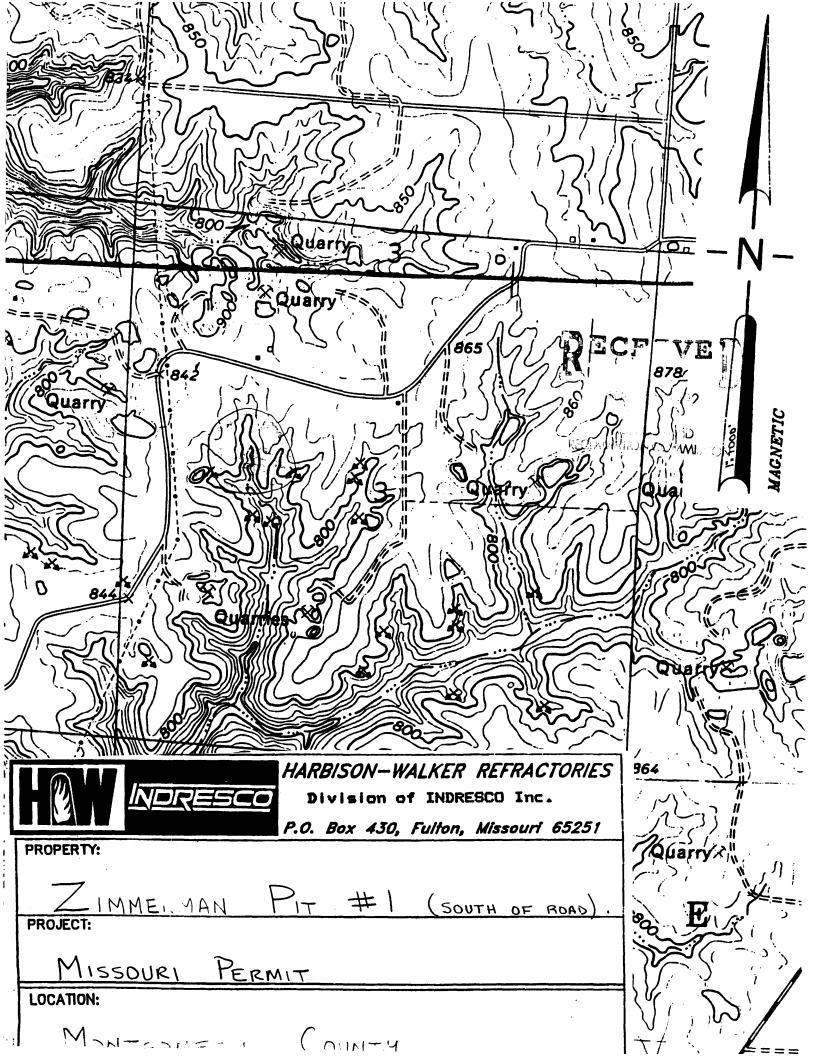
MO 780-1327 (12-91)

PAGE 4 OF 5

By my signature, I attest to the following:

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT  Jeffrey P. Jahn | Jeg P Jal   | MILE Manager- Mining & Explor  | DATE 8/17/92   |
|---|---|--------------------------------|--|
| NOTARY PUBLIC EMGOSSER SEAL             | SUBSCRIBED AND SWORN BEFORE ME. THE  // The DAY OF Aug. | lis /                          | COUNTY (OR CITY OF ST. LOUIS)  Allegheny  USE RUBBER STAMP IN CLEAR AREA BELOW |
| ·                                       | NOTARY PUBLIC SIGNATURE Loretta M. Dottschling          | MY COMMISSION EXPIRES  3-20-95 |  |
|   |   | schlina                        | 7  |
| APPROVED BY (DIRECTOR'S REPR            | ESENTATIVE)   | DATE APPROVED                  | PERMIT NUMBER  |



SOUTHEAST DANVILLE OUTREZIMMER \_\_ T.47N.-R.5 W. RTHEAST Herte HC RB PAGE 15 Edmund Burke 33 Robert w DANVIL LE Meyer. ctal Michael Cates, etal Commission 6 492 Refractories Co. 90 WILDLIFE AREA Ville Brick 40 Cd Frieda turley E. Carter, etal 251 Alleman Conservation Robert 560 David Hainte, Hause Amelia Blaue Vames B. Hubbard,eta Martha 40 Ray Russell Wright Ralph 70. Z Greffet Greffet 16 Robert L. Schmidt 220 ai Louis Batte Clei Clarence PINNACLE Whitt John W. Tracy Spreier Weberut 100 230 ESTATES Mrs Victor Schroer Carl H Grave 160 320 80 Elliott Dehlei 280 Harry E. Hetar Victor Gloc BIG SPRING 8 3/A 7A Gerald Schmidt Stella 33° ican Walter Uthlaut Farms. Inc Hauser etua Ģ. 304 @ 1984 Rockford Map Publs., SEE PAGE AUG 2 8 1992 MISSOURI LAND

RECLAMATION COMMISSION

### ELMORE FORD, INC.



RALPH JOHN BYRON

Home of Ford and Mercury Cars

and Ford Trucks FORD

PHONE: (314) 564-2295 Your Truck Professionals (314) 564-2245

Highway 19 South

Montgomery City, Missouri

## Niedergerke Agency

106 West Second Street Montgomery City, Missouri 63361



W. J. (Bill) Niedergerke

PHONE: **Business 564-3433 Residence 564-2390** 

INSURANCE - BONDS - REAL ESTATE

9. & 10A. The discrepancy between last year's permit and this year's permit was caused by the fact that we have two pits on different sites both named Zimmerman #1. The following pits listed on last year's permit are on the same site, Zimmerman #1 (South of Road).

| PIT       | ACRES | PERMIT NO. |
|-----------|-------|------------|
| Zimmerman | <br>5 | 74-146-A   |
| Zimmerman | 5     | 75-146     |

The following pits are on the Zimmerman #5 (North of Road) site.

| PIT          | ACRES | PERMIT NO. |
|--------------|-------|------------|
| Zimmerman    | 2     | 77-146     |
| Zimmerman #1 | 3     | 79-146     |
| Zimmerman #5 | 4     | 81-146-A   |

I regret the confusion this may have caused.

- 10. B. A revised page 4 of 5 is enclosed. We will replace 12 inches of topsoil.
- 11. A. I changed the land use on two acres of this site to wildlife. An additional page 3 of 5 and a revised page 4 of 5 are enclosed.
  - B. The revised page 4 of 5 from Question 11A, also has the topsoil replacement depth changed to 12 inches.
- 12. The reclaimed land use on one acre of this site has been changed to wildlife. An additional page 3 of 5 and a revised page 4 of 5 is enclosed.
- 13. Yes, a variance has been applied for on this site. A revised page 4 of 5 is enclosed.
- 14. We have not applied for a variance on the Stockton #1 site. The pit is graded to traversable slopes and has been seeded. The water level has to raise and additional seeding will be required before this site can be released. Grading of gullies and installation of terraces may also be required.
- 15. Yes, a variance has been applied for on this site. A revised page 4 of 5 is enclosed.
- 16. A. See response to Question 4.
  - B. A revised page 4 of 5 is englosed. We always take a soil test to determine the proper treatment.

## MISSOURI DEPARTMENT C. NATURAL RESOURCES CEIV

#### LAND RECLAMATION COMMISSION **SITE INFORMATION FORM**

AUG 3 0 2000 P.O. BOX 176
JEFFERSON CITY, MO 65102

| SITE NAME OR NUMBER   | MISSOURI LAND PERMIT NU<br>RECLAMATION COMMISSION | MBER                       |
|---|---|----------------------------|
| Zimmerman 5 and North of Road 146   |   |                            |
| COMPANY NAME  |   |                            |
| Harbison-Walker Refractories Company  |   |                            |
| COUNTY  | 1/4 SECTION                                       | SECTION                    |
| Montgomery  |   |                            |
| тоwnsнір Sect. 3, Т. 47 N., R. 5 W. (27 acres)  | RANGE   | ACRES                      |
| Sect. 34 T. 48 N., R. 5 W. (13 acres)   |   | 40                         |
| RIVER OR STREAM NAME (FOR IN-STREAM ACRES)  |   |                            |
|   |   |                            |
| MINERAL COMMODITY   | ESTIMATED TO                                      | NS/YEAR (FOR GRAVEL SITES) |
| Fire Clay   |   |                            |
|   |   |                            |
| NAME OF LANDOWNER (ATTACH A LIST IF MORE THAN ONE)  |   |                            |
| See Attachment  |   |                            |
| ADDRESS   |   |                            |
|   |   |                            |
| CITY  | STATE   | ZIP CODE                   |
|   |   |                            |
| SOURCE OF RIGHT TO MINE (CHECK ONE):  |   | DATE OF AGREEMENT          |
| MINERAL DEED  | LEASE   |                            |
| WARRANTY DEED   | VERBAL AGREEMENT                                  |                            |
| OTHER (DESCRIBE):   |   |                            |
|   |   |                            |
|   |   |                            |
| MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE)   |   |                            |
| Harbison-Walker Refractories Company  |   |                            |
| ADDRESS   |   |                            |
| P.O. Box 430  |   | T                          |
| CITY  | STATE   | ZIP CODE                   |
| Fulton  | Missouri  | 65251                      |
| SOURCE OF RIGHT TO MINE (CHECK ONE):  |   | DATE OF AGREEMENT          |
| MINERAL DEED  | X LEASE   | See Attached               |
| WARRANTY DEED   | VERBAL AGREEMENT                                  | L                          |
| OTHER (DESCRIBE):   |   | <del></del>                |
| NOTE: Each site must be sown on a map and be included in a public notice and an approved mine plan. |   |                            |

#### Landowner Detail Attachment



AUG 3 0 2000

Parcel 1 (refer to map)

MISSOURI LAND
RECLAMATION COMMISSION

Landowners

. . . . . . . .

Dale and Madaline Strube Strube Road

New Florence, MO 63363

Mineral Insrument

Minerl Lease to Wellsville Firebrick Company Dated 7/24/56 assigned to Harbison-Walker

**Refractories Company** 

Parcel 2 & 3

Landowners

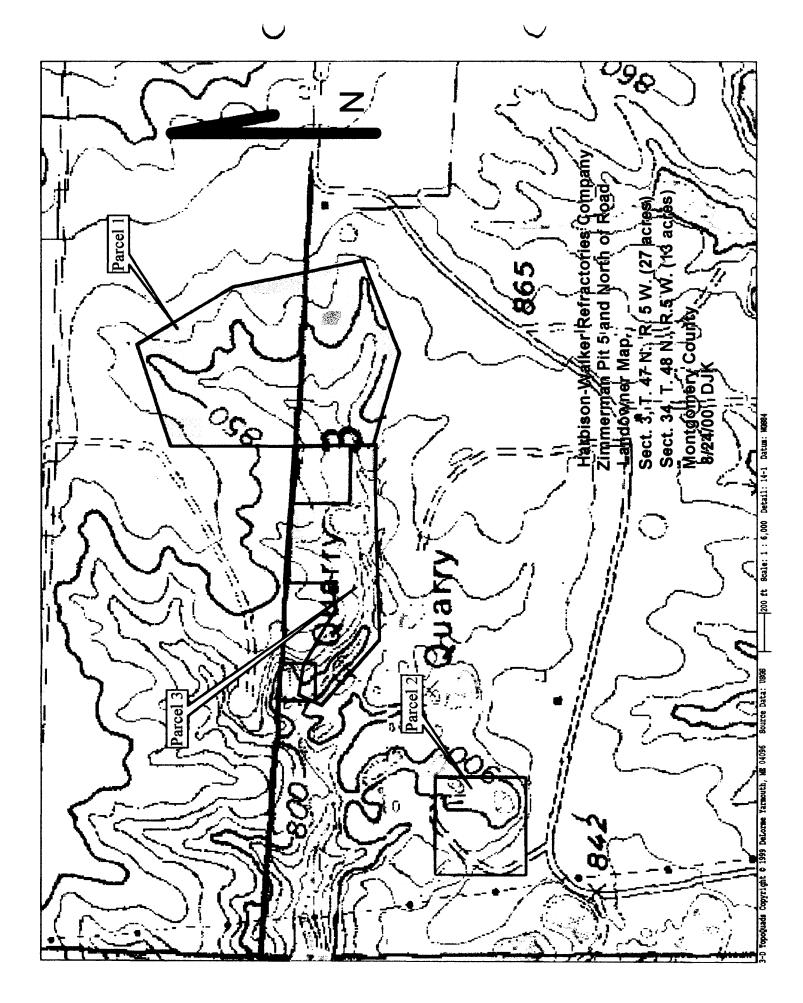
Gale and Michelle Johnson 201 North Main Street New Florence, MO 63363

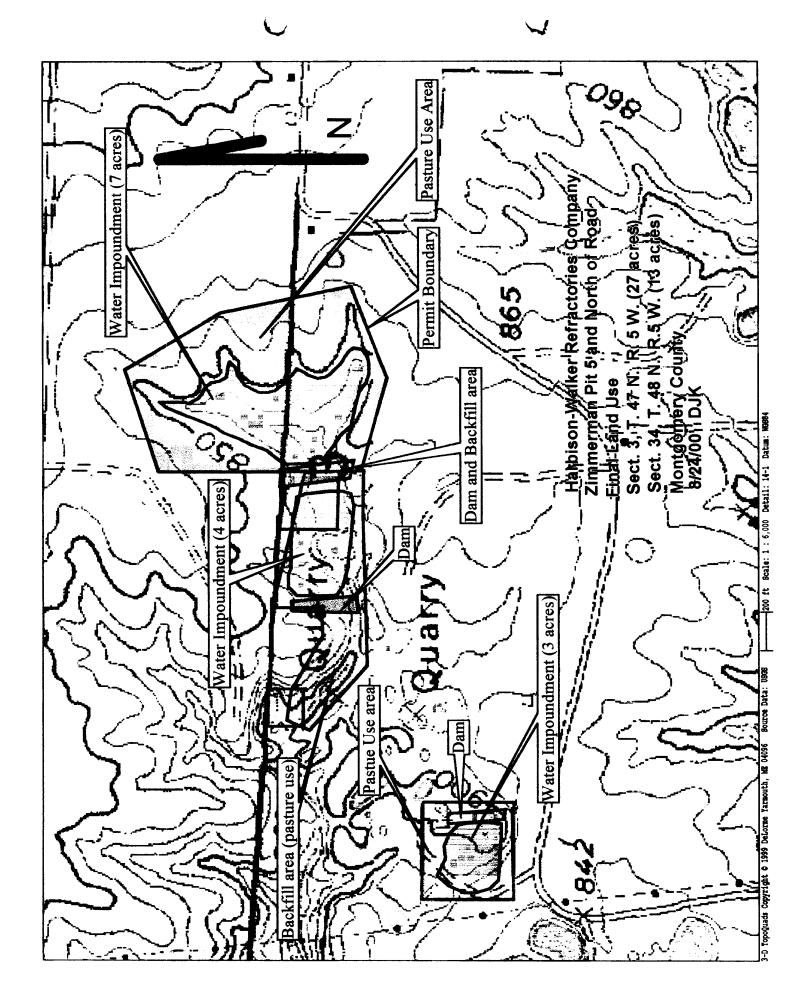
Brenda and Sidney Devlin 811 Brenda Street New Florence, MO 63363

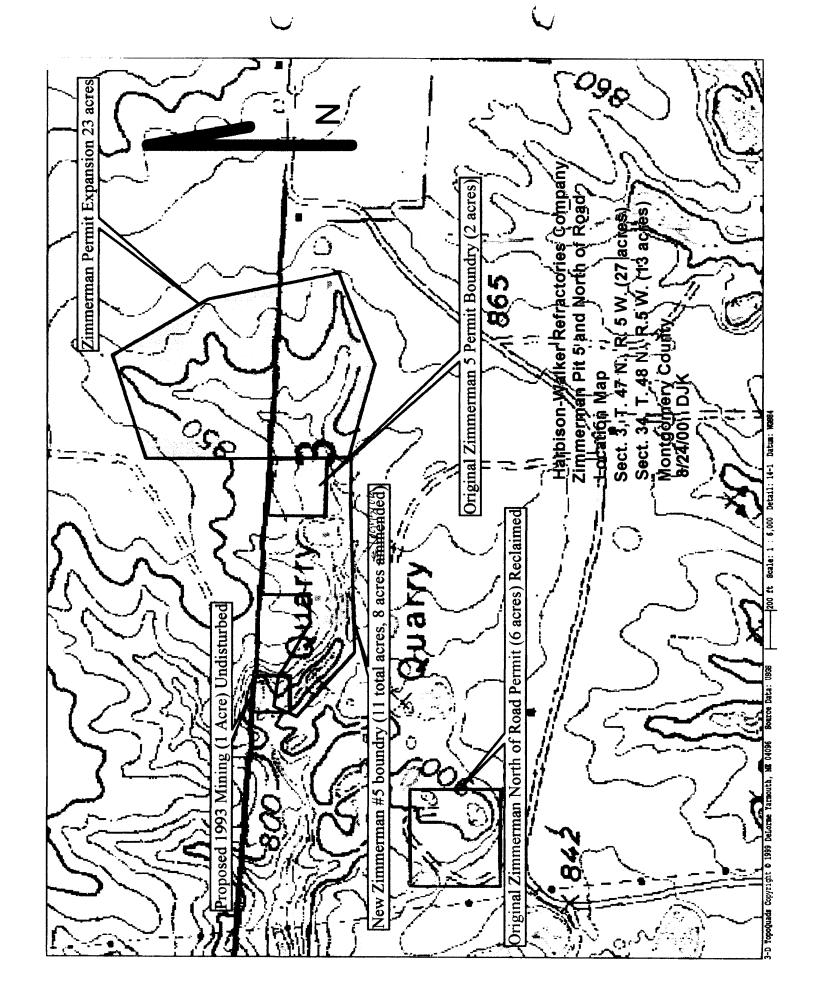
Roger Johnson 409 S. Adams Street New Florence, MO 63363 Mineral Instrument

Mineral Lease to Harbison-Walker Refractories

Dated 8/1/74







# MISSOURI DEPARTMENT OF NATUR RESOURCES LAND RECLAMATION COMMISSION



## **RECEIVED**

### PERMIT APPLICATION FOR INDUSTRIAL MINERAL MINES

AUG 3 0 2000

| TYPE OF PLAN (CHECK ONE)   | MICCOLIDI LAND                              |
|--|---|
| SHORT TERM, FOR ONE PERMIT YEAR  | MISSOURI LAND<br>RECLAMATION COMMISSION     |
| X LONG TERM, FOR PERIOD THROUGH DATE: 12/31/2050   |   |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING  | SOU VEGETATION AND TOPOGRAPHY               |
| DESCRIPTION OF SITE PRIOR TO LAND RECLAMMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING   | SOIL, VEGETATION, AND TOPOGRAPHT            |
|  |   |
|  |   |
| The 23 acre expansion area is currently being used for timber and livestock  | lands. The pit occurrs in a draw            |
| to the east of the old pit. The area to the west of the proposed expansion wa  | ·   |
| currently impounding water. Slopes around the impoundment are steep and All currently disturbed areas are pre-1992 and no tp soil was salvaged.                    | need to be reclaimed.                       |
| 7 in our only disturbed areas are pre 1002 and no ip 30h was salvaged.   |   |
|  |   |
|  |   |
| OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.  |   |
|  |   |
| AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING  | IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE? |
| 12 INCHES  | VES V NO                                    |
| 12 INCHES  | YES X NO                                    |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL  |   |
|  |   |
|  |   |
| Topsoil on the expansion area to the east will be removed using rubber-tired   | •   |
| conditions warrant. The topsoil will be stored near the pit within the permit a<br>12 inches of surficial material from all areas to be disturbed before mining be |   |
| proper topsoil handling procedures. No topsoil was saved from Pre-92 mine  | •   |
|  |   |
|  |   |
|  |   |
|  |   |
| DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION   |   |
|  |   |
| Surficial material will be stored in gently sloping piles and will be seeded with to control any erosion. Best management practices will be used in the handle     |   |
| necessary.   | and storage or topson as                    |
|  |   |
|  |   |
|  |   |
|  |   |

| DESCRIBE METHODS AND LOCATION OF                    | SPOIL PLACEMENT AND DISPOSAL   | AUG 3 0 2000  |
|---|--|---|
|   |  | MISSOURI LAND<br>RECLAMATION COMMISSION               |
|   | singbull-dozers and rubber tired scrapers.<br>a property line and to construct a dam   | The spoil will be used as backfill to the west of the |
|   |  |   |
| C. ACID MATERIALS  DESCRIBE METHODS AND EQUIPMENT U | ISED FOR HANDLING ACID MATERIALS (IF NONE IS ANTIC   | IPATED, WRITE "NONE" BELOW)                           |
|   |  |   |
| None  |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
| PIT INFORMATION (GIVE A                             | LL DIMENSIONS IN FEET)   |   |
| DESCRIBE LOCATION AND ORIENTATION                   |  |   |
| see site maps                                       |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  |   |
| YES NO  |  |   |
|   |  |   |
| X Will  | any excavation be at or within fifty feet (50') of the ri  | ght-of-way of any public road?                        |
| X Will  | any highwall consisting of unconsolidated materials  | be left within fifty feet of the right-of way of and  |
|   | ic road? (NOTE: For unconsolidated materials left in   |   |
|   | near the right of way, and in no case may the excavering the feet plus on an one-half (1-1/2) times the content of the content |   |
|   | ter, unless a variance is granted by the Commission  |   |
| X Will  | any excavation start at or within fifty feet (50') of any  | property line?  |
|   | TE: If the answer is "yes", a safety barrier may be n  |   |
| MO 780-1327 (12-91)                                 |  | Page 2  |

B. SPOIL

RECEIVED

| • *         |        |        |          |        |
|-------------|--------|--------|----------|--------|
| RECLAMATION | PLAN - | 10 CSR | 40-10.02 | ⊿(D)2. |

| Α. | REVEGETATION | (Attach additional | l sheets, it | f needed) |
|----|--------------|--------------------|--------------|-----------|
|----|--------------|--------------------|--------------|-----------|

REVEGETATION MIX #1

PURPOSE OR LAND USE

MISSOURI LAND SEEDING OR PLANT TIME RECLAMATION COMMISSION

Mixture #1

\* Development

Fall or Spring

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

| SEEDING SPECIES                            | POUNDS/ACRE   | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|---------------|-----------------------|------------|
| Tall Fescue<br>Red Clover<br>Wheat or Oats | 25<br>5<br>30 |                       |            |

VEGETATION MIX #2

B. SEEDING OR PLANTING TIME

Mixture #2

<del>X Development</del>

Spring or Fall

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

During the first spring or fall after finish grading the seed mix will be either drilled in with a no-till drill or broadcast. Re-seeding will be done as needed to achieve a suitable stand.

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch

| SEEDING SPECIES  | POUNDS/ACRE                 | TREE OR SHRUB SPECIES | STEMS/ACRE |
|--|-----------------------------|-----------------------|------------|
| Orchard Grass Korean Lespedeza Wheat or Oats * Serecea Lespedeza (On Slopes) | 10<br>6<br>30<br>20 q 25 cc |                       |            |

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

MO 780-1327 (12-91)

\* Henris were changed or deleted as per conversation with Mi David Keller on 9-25-00.

#### B. GRADING

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY. INCLUDING SLOPES

Areas backfilled with spoil from the site will be graded to match the surrounding topography and covered with topsoil. Two impoundments will be left by the final phase of mining. The impoundments will be graded to traversable slopes above the anticipated water level using bulldozers. Terraces and diversion ditches will be constructed as necessary to control erosion.

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AUG 3 0 2000

MISSOURI LAND RECLAMATION COMMISSION

#### C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES

#### GRADING

Grading will be done as mining advances. The spoil will either be backfilled in previously mined areas, into storage piles, or into dams to create the impoundments. Final grading of all disturbed areas will be completed within one year after mining is completed

#### REPLACEMENT OF TOPSOIL

Topsoil will be spread using rubber tired scrapers and bulldozers within one year after grading is complete.

#### REVEGETATION

The site will be seeded in the fall or spring after topsoil replacement.

| AVERAGE DEPTH OF REPLACEMENT TOPSOIL (INCHES) 12  |                  |
|---|------------------|
| D USE OF LAND WHEN RECLAIMED  Estimate acreage of each land use below, after reclamation: | ESTIMATED ACRES: |
| Wildlife (forest or other habitat with livestock excluded)                                | 0                |
| Agricultural (pasture, cropland, and horticultural)                                       | 27               |
| Development (residential, industrial, and recreational)                                   | 0                |
| Water impoundments (for wildlife, agricultural, or development)                           | 13               |

MO 780-1327 (12-91)

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AUG 3 0 2000

By my signature, I attest to the following:

MISSOURI LAND RECLAMATION COMMISSION

- 1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
- 2. I or the company I am authorized to represent intends) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo (Supp. 1990), and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
- 3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
- 4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

| SIGNATURE OF APPLICANT                  | 1  | Gedogios .        |   |
|---|--|-------------------|---|
| NOTARY PUBLIC EMBOSSER SEAL             | STATE Missouri   | y                 | COUNTY (OR CITY OF ST. LOUIS)  Callawry     |
|   | SUBSCRIBED AND SWORN BEFORE ME,                        | THIS              | USE RUBBER STAMP IN                         |
|   | 28 DAY OF August                                       | 20 🗸 نام          | CLEAR AREA BELOW                            |
|   | NOTARY PUBLIC SIGNATURE                                | MY COMMISSION     | NOTARY PUBLIC                               |
|   | Karen S Lander   | 7/18/2003 ST      | ATE OF MISSOURI                             |
|   | NOTARY PUBLIC NAME (TYPED OR PRINT<br>Karen 5. La ther |                   | LLAWAY COUNTY MISSION EXPIRES JULY 18, 2003 |
| APPROVED BY (DIRECTOR'S REPRESENTATIVE) | DATE APPROV  | /ED PERMIT NUMBER |   |
| Tres Strange                            | 10-3   | 1-00 146          |   |
| MO 780-1327 (12-91)                     | •  | ,                 |   |

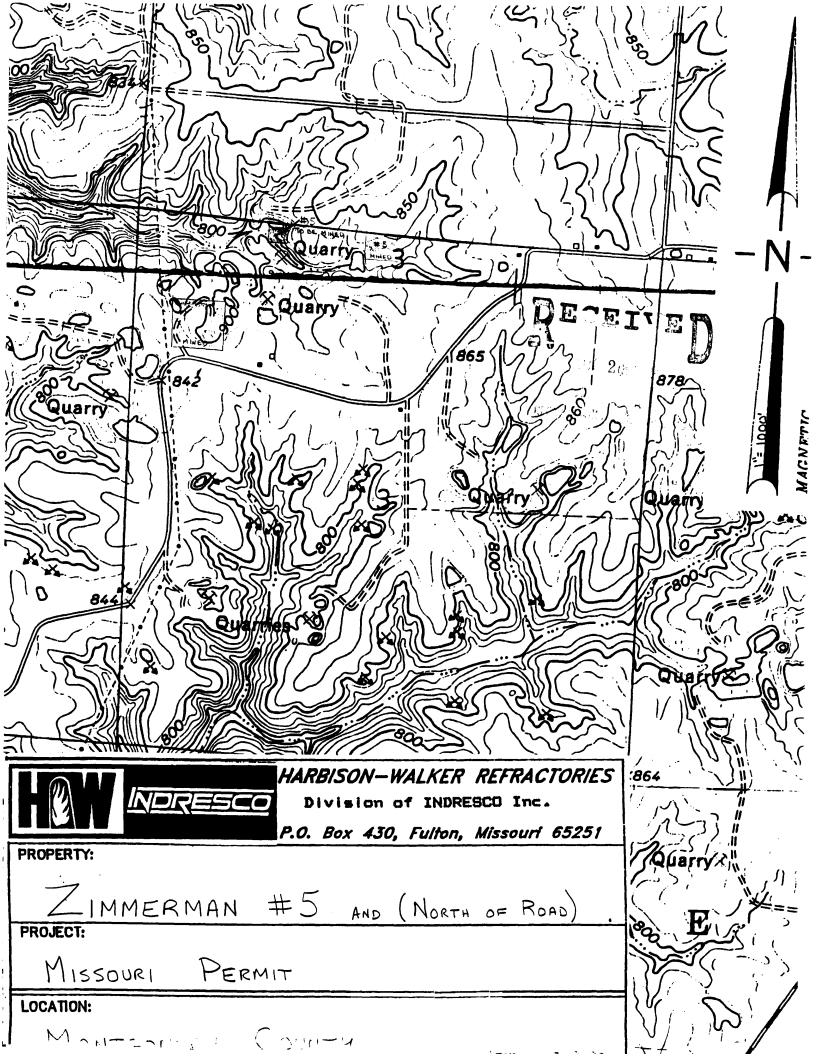
RECEIVED

# Montgomery

Montgomery County, Mo

AUG 2 8 1992 ZIMMERMAN #5 (N OF ROAD) T.47N.-R.5W. MISSOURI LAND ERHARMANENCOMUSTORE Herre HC. RB Pobert H DHNVILLE Yeyer. etal Michael Cates, etal Ernest Strube 116.17 Clayton Miller WILDLIFE AREA 47 efrieda. Alleman Conservation Commission 7 560 Spreier 380 149 wrenc Waldo 127 Vernon Steffe Ralph Russell obert Le Schmidt Fred Kimmich 220 Louis Barro Cler 24 230 Mrs Victor Schroer Carl H. Grave, so eta. Schmidt 80 Carl \$ Evelyn Grave 77 04 75 04 75 04 Spire ! Gloc 8 3/4.78 Stella Christia Uthlaut arms. Inc Walter Hauser etux Fred Schi \$ 228.75 304

@ 1984 Rockford Map Puble.,



9. & 10A. The discrepancy between last year's permit and this year's permit was caused by the fact that we have two pits on different sites both named Zimmerman #1. The following pits listed on last year's permit are on the same site, Zimmerman #1 (South of Road).

| PIT          | ACRES | PERMIT NO. |
|--------------|-------|------------|
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| Zimmerman #1 | 5     | 75-146     |

The following pits are on the Zimmerman #5 (North of Road) site.

| PIT          | ACRES | PERMIT NO. |
|--------------|-------|------------|
| Zimmerman    | 2     | 77-146     |
| Zimmerman #1 | 3     | 79-146     |
| Zimmerman #5 | 4     | 81-146-A   |

I regret the confusion this may have caused.

- 10. B. A revised page 4 of 5 is enclosed. We will replace 12 inches of topsoil.
- 11. A. I changed the land use on two acres of this site to wildlife. An additional page 3 of 5 and a revised page 4 of 5 are enclosed.
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- 14. We have not applied for a variance on the Stockton #1 site. The pit is graded to traversable slopes and has been seeded. The water level has to raise and additional seeding will be required before this site can be released. Grading of gullies and installation of terraces may also be required.
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- 16. A. See response to Question 4.
  - B. A revised page 4 of 5 is enclosed. We always take a soil test to determine the proper treatment.